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THE EFFECTS OF STORY GRAMMAR ON THE ORAL NARRATIVE SKILLS OF ENGLISH LANGUAGE LEARNERS WITH LANGUAGE IMPAIRMENTS

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ABSTRACT

Studies with monolingual English speakers have demonstrated the significance of children's narrative development for the acquisition of literacy skills. This research has shown that children's ability to perform school narrative tasks may significantly predict children's early literacy skills (Gutiérrez-Clellen, 2002), including English reading comprehension outcomes within and across languages in Spanish-speaking ELLs (Miller et al., 2006). This study investigated the effects of a story grammar intervention that used a Story Grammar Marker ® and repeated story retells on the oral narrative skills of third and fourth grade ELLs with SLI. A single case multiple probe across participants design was used to examine the effects of the story grammar intervention on four dependent variables: narrative proficiency in oral narratives (primary dependent variable), narrative productivity, and syntactic complexity. Findings from the study suggest that the story grammar intervention had a positive effect on the narrative proficiency of ELLs with SLI. It did not, however, show an increase for narrative complexity nor for syntactic complexity measures. Implications for future research and for practice are provided.

DEDICATION

I would like to dedicate this dissertation to my family. My parents and my husband have unfailingly encouraged me throughout the process. My mother has always told me for as long as I can remember that I could do anything I wanted to do and that I "could have it all." Thank you, Mom for always believing in me.

To my husband, who never once complained about the parts of daily living that were left undone, and who reminded me through it all that I was good enough, I want to say that I appreciate you more than you will ever know. No one has ever shown me more love and patience. To my children, I dedicate this dissertation to you too. I hope you can see that there is nothing you cannot accomplish.

Finally I dedicate this dissertation to the children that I have worked with who have inspired me to be a better teacher, who have caused me to question what we do as educators, who have challenged me. I have been both inspired and motivated by you and your families.

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I want to express my gratitude to Dr. Katsyannis for keeping me "focused" and pushing me to keep going. His passion for the field of special education and his work ethic are exceptional. His thoughtful guidance has enabled me to grow as a researcher, a writer, and an educator.

Most of all I would like to acknowledge the contributions of Dr. Correa. I have been inspired by her devotion to her work with diverse families and her passion for multiculturalism. Her mentorship and support have guided me through the last several years. I will be forever grateful for her encouragement, patience, support, enthusiasm and friendship.

I will treasure these years of my doctoral journey, and I recognize that the contributions of this committee have helped to shape my growth as an educator.

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CHAPTER ONE

INTRODUCTION

The population of English Language Learners (ELLs) has increased dramatically in classrooms across the United States. According to the National Center for Education Statistics (2012), the total student enrollment in elementary and secondary schools in the United States grew by approximately 3 % from the fall of 2002 to the fall of 2008. During that same time period, however, the number of K–12 students identified as ELLs grew by approximately seven percent. From 1997 to 2008, the number of ELLs increased by 53%, (National Clearinghouse for English Language Acquisition & Language Instruction Educational Programs [NCELA], 2010), and 70% of ELLs are Spanish speakers. In 2009-2010, 22% of all students had speech or language impairments (U.S. Department of Education, 2012). Children with delayed language development typically have a limited ability to understand and tell stories (Davies, Shanks, & Davies, 2004).

For English Language Learners (ELLs), oral language proficiency plays an important role in the acquisition of reading and narrative skills which require receptive and expressive skills as well as vocabulary, phonology, morphology, grammar and discourse patterns (Lesaux & Geva, 2006). Studies with monolingual English speakers have demonstrated the significance of children's narrative development for the acquisition of literacy skills. This research has shown that children's ability to perform school narrative tasks may significantly predict children's early literacy skills (Gutiérrez-Clellen, 2002), including English reading comprehension outcomes within and across languages in Spanish-speaking ELLs (Miller et al., 2006). ELLs who are entering U. S.

public schools face an enormous challenge in that they need to develop both oral language proficiency skills and narrative skills in a second language (LeSaux & Geva, 2006).

It is difficult to form conclusions about the interaction effects of dual language learning, language impairments, and narrative skills. Although the research base is growing, there are relatively few empirical studies describing the course of language development in dual language learners who have language impairments and most have focused primarily on morphosyntactic or semantic skills (see Peña & Bedore, 2008 for a review). This dissertation adds to the literature on narrative skill development of 3rd and 4th grade Spanish-speaking ELLs with Specific Language Impairment (SLI). In the following sections, a rationale for studying intervention strategies for ELLs with SLI is discussed. The discussion is presented in seven sections: (a) the theoretical framework that supports the investigation; (b) the importance of narrative skills; (c) narrative skills and SLI; (d) narrative skills and ELLs; (e) narrative skills and ELLs with SLI; (f) the research questions guiding this study; and (g) the definitions of relevant terms.

Theoretical Framework

The theoretical framework on which this research study is based is cognitive load theory (CLT; Sweller, 1994) and Baddeley's (2000) working memory model. CLT is concerned with the development of instructional strategies that help students to be able to effectively use the limited cognitive processing capacity to acquire new knowledge or skills (see a representation of CLT in Figure 1). CLT assumes that cognition is

accomplished through the use of a limited working memory in conjunction with partially independent processing units for visual/spatial and auditory/verbal information, which interacts with a comparatively unlimited long-term memory.

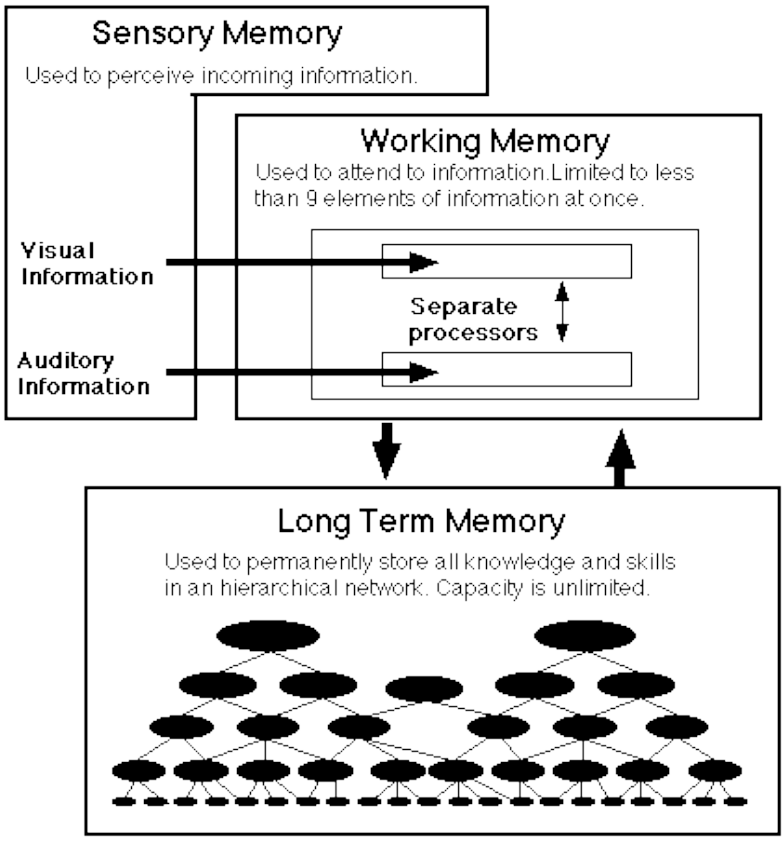

Figure 1.1. A representation of cognitive load theory. This model demonstrates the interaction between working memory and long term memory in the processing of visual and auditory information. Retrieved from http://dwb4.unl.edu/Diss/Cooper/UNSW.htm.

The working memory model, according to Baddeley (2000), is a multicomponent, capacity-limited system. Five components make up the working memory model: the phonological loop, the visuo-spatial sketchpad, the episodic buffer, the central executive, and the long term memory (LTM). The phonological loop, a capacity-limited temporary

storage system, is specialized for manipulation and retention of verbal material, and the visuo-spatial sketchpad works with visual and spatial information. The episodic buffer allows for integration of information from the phonological loop, the visuo-spatial sketchpad, and the LTM. The central executive coordinates all other components of the working memory, binding information from multiple sources in order to form episodes which are consciously retrievable in chunks. (See Figure 1.2 for a representation of the working memory model).

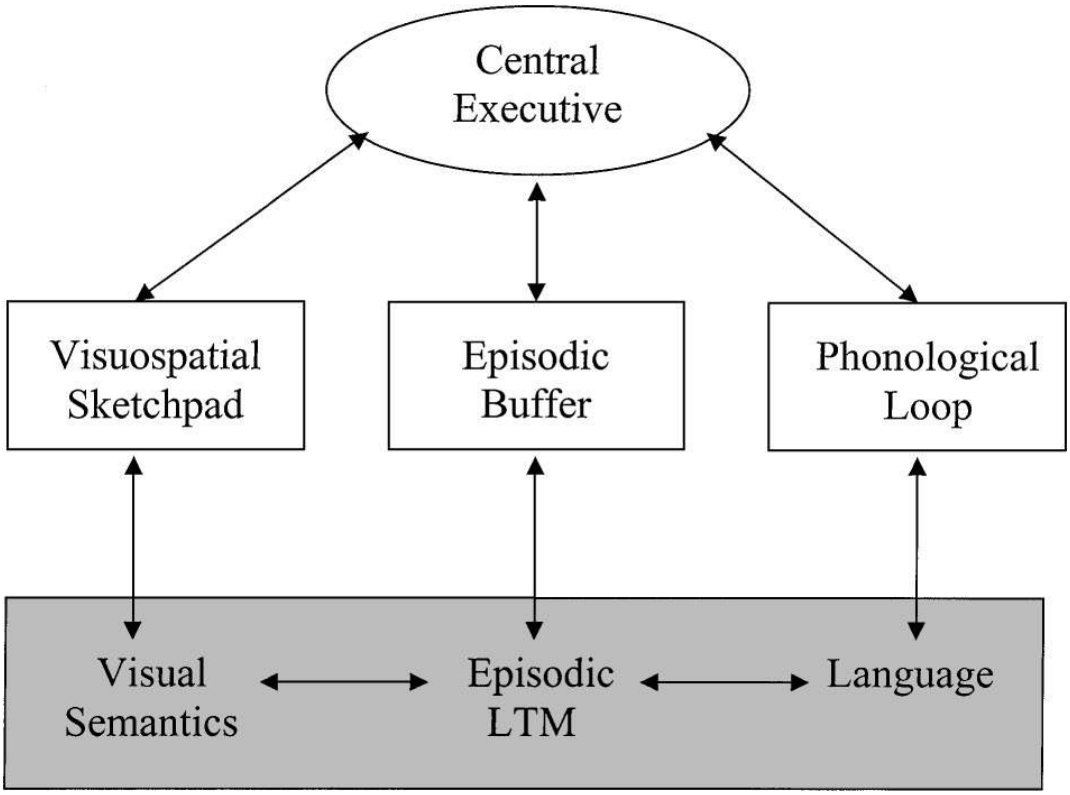

Figure 1.2. A representation of Baddeley's working memory model (2000).

Within Baddeley's model of working memory, it has been suggested that children with SLI have limited working memory capacity (as represented by the phonological loop) in comparison to children with typical language development (Gathercole &

Baddeley,1990). Concerning ELLs, Service, Simola, Metsänheimo, and Maury (2002) investigated whether there is a measurable extra load on working memory when L2 is the language being used for comprehension. Thirty Finnish/English bilingual students attending a university were asked to indicate whether a sentence they heard was true or false in relation to simultaneously shown pictures on a computer screen and to remember the last word of each sentence. The sentences were presented in growing set sizes and recall of all the last words was required after each set. The largest number of sentences that could be processed in combination with successful recall of their last words determined the participant's WM span. The task was presented first in one language and then in the other. Results indicated that participants had a longer WM span in the L1 than in the L2.

In considering the process of learning and cognitive load, there are two critical learning mechanisms: schema acquisition and the transfer of learned procedures from controlled processing to automatic processing (Sweller, 1994). According to Anderson (1984), a schema is an abstract structure used to obtain and store information. The schema organizes the information in a way that represents the way the pieces of information are related to each other. Schema can be brought from the long term memory (which has a potentially infinite capacity and serves as a long-term storage system within the individual) to deal with a large number of interacting elements that are too much for the working memory to handle. The schema can organize these elements into a chunk so that the chunk is only one element that has to be processed (Paas, Renkl, & Sweller, 2003). These knowledge structures are constantly changing as new information is added.

Schemas effectively increase the amount of information that can be held in working memory by chunking individual elements into a single element (Sweller, 1994). A diagram, not written steps to a process; a single word, not the individual letters need be remembered. Therefore, while the number of items held in working memory may be very limited, the amount of information held in working memory may be quite large and this may be one of the functions of schema acquisition. For example, one can remember the acronym, HOMES, instead of having to remember each of the names of the great lakes all at once. This is an example of a schema.

Automation also has a significant effect on working memory. According to Sweller (1994), processing information automatically requires less working memory space and as a consequence, capacity is freed for other functions. In this sense, automation, like schema acquisition, may have a primary function of circumventing limited processing capacity. For example, when a reader has automaticity of word recognition and does not have to decode every word, there is more working memory available for comprehension processing.

Applying cognitive load theory (Sweller, 1994) to the narrative skills of ELLs with SLI makes sense because children with SLI tend to have cognitive process weaknesses in working memory (Montgomery, 1995) which makes integration of information problematic (Dodwell & Bavin, 2008). Children with SLI tell shorter narratives with less lexical diversity, less sentence complexity and fewer story grammar elements (Hayward, Gillam, & Lien, 2007). Moreover, ELLs appear to have shorter working memory spans in L2 (Service et al., 2002) which complicates their telling stories

in the L2. This study incorporates the cognitive load theory (Sweller, 1994) by using the Story Grammar Marker® to explicitly teach the story grammar story structure to ELLs with SLI. If children can incorporate the story grammar structure into the long term memory, it can be accessed as a schema for story building, decreasing the cognitive load required for retelling stories. Using repeated retells that incorporate the story grammar framework, may help promote automaticity in the children's narrative skills which can free up more working memory.

Narrative Skills

Narrative ability, the ability to tell stories, plays a major role in human communication as it is a part of daily routines, social interactions, and academic activities (Duinmeijer, de Jong, & Scheper, 2012), making it a crucial skill in the development of a child. Narration is used to express intentions, desires, and needs. It is essential for participation in interpersonal interactions, and for expressing comprehension in order to successfully participate in school activities (Heilman, Miller, Nockerts, 2010; Petersen, Gillam, Spencer, & Gillam, 2010). Prior research on monolingual English-speaking children has indicated that narrative ability is a valid measure of the linguistic and communicative competence of a child (Botting, 2002) and a good predictor of later reading outcomes (Dickinson & McCabe, 2001; Gutiérrez- Clellen, 2002). Narrative skill proficiency is acquired over time, following a developmental continuum marked by differing levels of complexity in linguistic features (microstructure) and in general organization (macrostructure; Petersen et al., 2010).

Measures of microstructure include measures of language productivity such as the number of utterances or communication units (C-units), total number of words (TNW), mean length of utterance (MLU), and number of different words (NDW; Heilmann, Miller, Nockerts, & Dunaway, 2010). These measures indicate the amount of language produced in a certain period of time (Bedore, Peña, Gillam, & Ho, 2010). MLUs and TNW are significant measures because they systematically increase with age in typically developing children (Bedore et al., 2010). MLUs and NDW are useful measures for estimating syntactic (Brown, 1973) and semantic (Bedore & Peña, 2008) complexity. Other measures of narrative microstructure include: verb tense, subordinating conjunctions, prepositional phrases, and pronomial references (Fiestas & Peña, 2004; Heilmann, Miller, Nockerts et al., 2010).

Macrostructural analysis, on the other hand, examines language skills beyond the utterance level and documents children's ability to create a story by the integration of concepts (Heilmann Miller, Nockerts et al., 2010). Macrostructure refers to the structure of the story itself. Most macrostructural analyses of children's narratives are rooted in the story grammar tradition, which proposes that all stories have a setting and episode system (Stein & Glenn, 1979). In the classroom, higher value is placed on narratives that follow the organizational pattern known as story grammar (Stein & Glenn, 1979). Story grammar is a structure-based model or schema of story knowledge. Story grammar represents the typical structure of fictional narratives and identifies stable patterns of causally and temporally related information most often found in stories (Stein and Glenn, 1979). Story grammar elements include: characters, setting, initiating event, internal

response, plan, attempt, consequence, and resolution. The following paragraph illustrates an example of how the story grammar framework fits into a typical narrative.

In the story Corduroy (Freeman, 1968), the main characters are Corduroy, the bear, a little girl, and her mother (characters). Corduroy is a stuffed teddy bear that waits day after day in a department store (setting), waiting for someone to take him home. One day, a little girl sees him and wants to take him home, but her mother says she cannot because he has a button missing on his overalls and does not look new (initiating event that "kicks" off the story). This makes Corduroy sad (internal response), so he decides to look for his button in the store at night (plan of action). He looks on the floor (attempt #1). He looks in the furniture department and thinks a mattress button is his button (attempt #2). Finally a security guard finds him and takes him back to the toy department. The next day, the girl comes back and buys Corduroy with her own money (consequence), and Corduroy is happy (resolution).

In order to communicate through narratives, children must construct a context for the listener with their words (Snow, 1991). Because these narratives are usually focused on temporally removed events that are fully understood only by the narrator, he must be skilled in the use of complex, descriptive language to convey his story (Petersen, 2011).The creation of a good narrative involves the coordination of the organization of events (story grammar) with the sentence level production skills that convey meaning (microstructure; Bedore et al., 2010).

Narrative Skills in Children with SLI

Specific language impairments in school aged children are characterized by difficulties with developing language at the expected rate, not caused by known neurological, intellectual disabilities or hearing loss (Bishop, 1992). This difficulty occurs despite scoring within normal limits on hearing tests, social/emotional assessments, and nonverbal cognitive assessments (Cleave, Girolametto, Chen, & Johnson, 2010) and can affect expressive or receptive language skills (Bedore & Peña, 2008). Narrative development is one language domain in which weaknesses have been consistently found in children with SLI (Boudreau, 2007b). Both production and comprehension of narratives are areas of difficulty for these students (Cleave et al., 2010).

Research has shown that children with SLI include fewer story grammar elements in their narratives (Merritt and Liles, 1987), produce shorter narratives than those of age-matched peers (Botting, 2002), and have lexical difficulties, such as problems acquiring new vocabulary and finding the right word (Verhoeven, Steenge, van Weerdenburg, & van Balkom, 2011). Notwithstanding the findings in the research for children with SLI, there is a paucity of research examining narrative skills for Spanish-speaking children (Schoenbrodt, Kerins, & Gesell, 2003) and for ELLs with SLI (Cleave et al., 2010).

Understanding more about narrative development in ELLs with SLI is important for a number of reasons. First, narrative abilities have been found to be linked to literacy development and academic achievement in typically developing children (Dickinson & Tabors, 2001). Second, weaknesses in narrative skills are less likely to improve over time

(Girolametto, Wiigs, Smyth, Weitzman, & Pearce, 2001). Third, narrative skills have been found to be a predictor of language progress (Cleave et al., 2010). Fourth, narratives provide a rich source of information about a child's language skills (Cleave et al., 2010). Finally, narratives have been recommended as a less biased method of language assessment for dual language learners because cultures all over the world use narratives to relate and interpret experiences (Gutiérrez-Clellen, 1995), and therefore are a more naturalistic means of collecting and examining linguistic performance data (Peña, Summer, & Resendiz, 2007).

Narrative Skills in English Language Learners

ELLs who are developing both their first (L1) and second language skills (L2) may exhibit differences in performance on narrative production and comprehension tasks due to varying levels of competence in L1 and L2 (Gutiérrez-Clellen, 2002). Because these children are typically assessed in their L2, it may be difficult to determine whether their low literacy achievement is related to limited L2 proficiency or to specific language learning needs (Gutiérrez -Clellen, 2002). Research on the oral narrative development of bilingual children is only in the initial stages and is even more limited for bilinguals from low-SES families (Uccelli & Páez, 2007).

Some researchers have measured the narrative abilities in typically developing dual language learners by having them tell stories in both of their languages (e.g., Fiestas & Peña, 2004; Gutiérrez-Clellen, 2002; Pearson, 2002; Uccelli & Paez,2007;). Fiestas and Peña (2004) studied the effect of language on narrative production. They compared the narratives produced in English and Spanish by 12 dual language learners who were

equally fluent in both languages. In this study, children ages 4 to 6 years told stories based on wordless picture books. Samples were coded for elements of story grammar used in the narratives. No differences in overall story grammar ratings between the English and Spanish stories were noted, although there were some differences in aspects of the story grammar. Specifically, initiating events and attempts were included more often in Spanish narratives while consequences were included more often in English narratives. No differences were found between the English and Spanish narratives in terms of the number of words, the number of communication units, the length of communication units, or the proportion of grammatical utterances (measures of narrative productivity and complexity).

Gutiérrez-Clellen (2002) also examined narratives collected from Spanish/English dual language learners, but this study focused on narrative recall and responses to comprehension questions. Participants were 7- and 8-year-old Spanish/English bilinguals. No significant differences in the grammatical structure of utterances were noted between languages, indicating equal levels of language proficiency in L1 and L2. On both story recall and responses to comprehension questions, the results showed higher scores in English than in Spanish.

A longitudinal study of narrative skills and vocabulary development in bilingual Spanish/English children in Kindergarten and Grade 1 was completed by Uccelli and Páez (2007). Narratives were elicited in both languages using two different three-picture sequences and scored for productivity (number of words and number of different words) and quality (linguistic and story structure measures which included measures of story

grammar elements, and sequencing). The results revealed higher scores for story grammar in English than in Spanish narratives. However, no differences were reported for length of narratives or for linguistic measures such as syntax and references. References pertain to the use of a pronoun to refer to another noun. For example, in the sentence, "Tom was tired so he sat down", "he" refers to "Tom".

Finally, Pearson (2002) reported on a comparative study of the narrative skills of monolingual and dual language learners. As part of a larger study, this narrative component included 240 children in Grades 2 and 5. Participants consisted of a group of monolingual English speakers and a group of English/Spanish dual language learners. Narratives were elicited using a wordless picture book. When comparing story scores (elements of macrostructure such as story grammar and sequencing) and language scores (elements of microstructure such as sentence complexity and morphosyntactic accuracy), the study demonstrated that, for English narratives, the monolingual children received higher scores in Grade 2, particularly for the language scores. However, the differences between monolinguals and bilinguals had almost disappeared by Grade 5, perhaps because of more exposure to English instruction. In addition, dual language learners received higher scores on English narratives than on Spanish narratives.

Narrative Skills and English Language Learners with SLI

Very few studies have tested the narrative abilities of dual language learners with SLI. In a study by McCabe and Bliss (2004), the narrative abilities of dual language learners with SLI were compared with those of dual language learners with typical language development (TLD) for children ages 8 to 11 years. Each participant produced

personal narratives in both English and Spanish. Experimenters described an event such as getting a shot at the doctor's, and then participants were asked to describe a similar event that happened to them. Results demonstrated that length of the narrative and use of narrative features were similar in both languages, but children with SLI produced shorter and less complex narratives than the children with TLD.

Cleave et al. (2010) compared narrative abilities of monolingual English speakers with SLI to dual language learners with SLI using standardized measures as well as narrative measures. Nine different languages were represented in the dual language learner group, and all were English dominant but exposed to an additional language in the home at least 25% of the time and spoke the additional language at least 10% of the time, based on parental report. The study concluded that both groups of children were remarkably similar. The children's narrative skills were compared on a number of dimensions and no significant differences were detected between the groups. On all narrative measures, the dual language learners with SLI performed at an equivalent level to the monolingual children with SLI. It was only on standardized tests of expressive morphosyntax that the dual language learners achieved significantly lower scores. Authors of the study suggest that the results of their study support the notion that standardized language tests are biased and that narrative measures may be a more appropriate and naturalistic way to evaluate language skills for dual language learners. Although the monolingual children and bilingual children did not differ on narrative measures, results indicated that both groups showed equivalent levels of difficulties in the

areas of morphosyntax and story grammar structures as would be expected in children with SLI.

Simon-Cereijido and Gutiérrez-Clellen (2009) examined within- and across-language relationships between lexical/vocabulary and grammatical domains of 196 preschool and school-aged Latino children with different levels of L1 and L2 proficiencies. Participants retold stories from wordless picture books in Spanish and English. Their narratives were analyzed using measures of vocabulary production (NDW and number of different verbs; NDV) and grammatical complexity (mean length of utterance in words; MLUWs and number of ditransitive verbs; verbs that require two objects). Results showed strong and significant positive correlations between vocabulary production and grammatical complexity within both languages, but with stronger correlations in Spanish.

Iluz-Cohen and Walters (2012) conducted a study with seventeen five- and six-year-old dual language learners with and without SLI in Israel. Participants in this study were sequential bilinguals whose L1 was English and L2 was Hebrew. Researchers analyzed the retellings of familiar stories in the two groups for number of story grammar elements, language productivity (i.e. number of words, word types, type/token ratios, MLUs, number of utterances that contained verbs), and code switching (moving back and forth between two languages within one language sample). Results showed that the narrative structure was basically similar across languages and across stories for children with and without SLI, but students with SLI were weaker in the areas of vocabulary,

language productivity, morphosyntax, and bilingualism (as measured by frequency of codeswitching).

Summary

It is difficult to draw definite conclusions about the links between narrative skills, dual language learning, and SLI as the data are limited in terms of the number of studies, the different types of measures and method of data analysis used, and the lack of study replications. However, the evidence does suggest that dual language learning appears to have relatively little impact on narrative skills for typically developing children (Cleave et al., 2010). While some studies reported that the children's productive narrative skills were similar in their two languages (Gutiérrez-Clellen, 2002), other studies determined that the ELLs displayed stronger skills in English narratives (Pearson, 2002; Uccelli & Páez, 2007). In the two studies that reported differences, one found differences in structure measures but not productivity or language form (Uccelli & Páez, 2007) while the other found differences in measures of language form but not narrative structure (Pearson, 2002). In addition, dual language learning did appear to have a significant effect on standardized measures of expressive morphosyntax, resulting in lower scores for this group (Cleave et al., 2010).

When examining studies in which participants with SLI were included, the evidence suggests again that dual language learning has no significant impact on length of narratives or narrative skills across languages (Cleave et al., 2010; Iluz-Cohen & Walters, 2012; McCabe & Bliss, 2004); however, when compared to bilinguals with TLD, discourse length was shorter and less complex for bilinguals with SLI (McCabe &

Bliss, 2004), and lexical and morphosyntactic skills were weaker for children with SLI (Iluz-Cohen & Walters, 2012).

This study addressed this need by examining the effects of a narrative intervention for 3rd and 4th grade ELLs with SLI. The following section presents the specific research questions that were addressed in this study.

Research Questions

The research questions guiding this study were:

1. To what extent will third and fourth grade Spanish-speaking ELLs with SLI improve narrative proficiency as measured by the Narrative Scoring Scheme as a result of the story grammar intervention?
2. To what extent will third and fourth grade Spanish-speaking ELLs with SLI increase productivity in their oral narratives as measured by TNW (total number of words) and NDW (total number of different words) as a result of the story grammar intervention?
3. To what extent will third and fourth grade Spanish-speaking ELLs with SLI improve syntactic complexity in their oral narratives as measured by MLUW (mean length of utterance in words) as a result of the story grammar intervention?
4. What are the perceptions of the participants and of the teachers and speech language pathologists (SLPs) who serve the participants in this study regarding the feasibility and efficacy of the story grammar intervention?

Definitions of Terms

The key terms used in this study are defined below:

- Coherence (of a narrative): refers to how semantically meaningful a narrative is
- Cohesion (of a narrative): how well the lexical and grammatical structures of a narrative relate to each other including the correct use of pronouns, conjunctions, and vocabulary
- Communication unit (C-unit): an independent clause together with all its modifiers
- Language impairment: the inability to learn language as manifested by deficits in expressive and or receptive language skills relative to age-matched peers who have comparable language exposure (Bedore & Peña, 2008).
- Narrative macrostructure: organizational structure of story which includes story grammar components and the complexity of episode structure
- Narrative microstructure: internal linguistic structures used in the narrative construction, such as conjunctions, noun phrases, communication units, to name a few
- Morphosyntax/ morphosyntactic: referring to the use of verb inflections, prepositions, pronouns and articles, gender, number, and syntax
- Oral narrative (noun): the telling or retelling of a story
- Story grammar elements: components of a typical story (e.g., character, initiating event, attempt, consequence)

- Story grammar marker: a tool made of braided yarn with icons attached that represent and sequence the components necessary to retell a story
- syntax/syntactic: referring to the rules of sentence structure and grammar

CHAPTER TWO

REVIEW OF RELEVANT LITERATURE

Research on the oral narrative development of bilingual children is only in the initial stages and is even more limited for Spanish/English bilinguals from low-SES families (Uccelli & Páez, 2007). There are very few empirical studies that include English Language Learners (ELLs) with Specific Language Impairment (SLI) as participants. The purpose of this chapter is to review the literature regarding the effectiveness of narrative skill interventions for monolinguals and ELLs with and without SLI. First, an introduction is given about the characteristics of narrative skills for children with SLI and for ELLs. Assessment of oral narrative skills is also discussed. Next, a description of the use of story grammar elements as an intervention is given. Finally, selected studies related to story grammar interventions for ELLs and students with SLI will be reviewed. Elements of the studies analyzed will include: (a) research designs, (b) characteristics of participants, (c) characteristics of research settings, (d) the nature of the dependent variables, (e) delivery methods of the interventions, and (f) major findings.

Narrative Development

Narrative language is an important aspect of language development for young children. Narration, or storytelling, is defined as orally presenting events that are causally related or orally presenting an experience in a specific temporal order (Peterson, 1990). Children begin to develop language skills from birth through interactions with more mature language users, and then, beginning at about the age of 3 or 4 years, children begin to tell stories (Stadler & Ward, 2005). These narrative skills then develop over

time. Children begin learning to tell stories by recounting personal experiences. Later, children tell stories during times of play, and finally they begin to retell stories they hear and to create fictional stories (McCabe & Rollins, 1994). Typically developing children are able to comprehend and retell stories by the age of six (Merritt & Liles, 1987).

Narratives require more complex language and higher level thinking than what is needed for daily conversations. In order to describe an event to a listener who did not share in that event, the storyteller must use explicit vocabulary, clear pronoun references, descriptive language, and must tell the story in a logical sequence (Petersen et al., 2010). Stories are typically told with a goal-oriented, problem–resolution, story grammar structure (Stein & Glenn, 1979). Stein and Glenn's story grammar structure is a framework or schema that defines the salient elements in fictional narratives. These elements include the characters, setting, initiating event, internal response, plan, attempt, consequence, and resolution.

Narrative Development in Students with SLI

Given the complexity of language needed to perform narration, it is not surprising that children with specific language impairments have difficulty comprehending and generating narratives (Bishop & Adams, 1992; Boudreau, 2007b; Cleave et al., 2010). A difficulty in both production and comprehension of narratives affects elements of microstructure (e.g., utterance complexity, lexical diversity) and macrostructure (e.g., story structure, cohesion), which are elements of narrative skill (see Boudreau, 2007 for a review). This difficulty can lead to an adverse effect on academic progress (Boudreau & Hedberg, 1999) as researchers have found moderate correlations between early childhood

narrative skills and reading achievement in later elementary grades (e.g., Dickinson & McCabe, 2001).

Monolingual children as well as ELLs with SLI show differences in narrative skills when compared with their typically developing peers (Duinmeijer et al., 2012). A number of studies have characterized the oral narratives of children with language impairments as containing fewer communication units, fewer complete episodes and less cohesion (e.g., McCabe & Bliss, 2004). Moreover, other studies have indicated that the narratives of children with SLI also use less sophisticated vocabulary (e.g., Iluz-Cohen & Walters, 2012).

Narrative Development in English Language Learners

For ELLs, their level of English language proficiency can have an effect on narrative development (Gutiérrez-Clellen, 2002; Muñoz, Gillam, Peña, & Gulley-Faehnle, 2003). ELLs who are developing both their first (L1) and second language skills (L2) simultaneously may exhibit differences in performance on narrative production and comprehension tasks, which might partially explain their performance on recall and comprehension of narratives in the classroom (Gutiérrez-Clellen, 2002). Data collected on language productivity from samples collected in one language may underestimate a bilingual child's language development in comparison to that of monolingual children (Muñoz et al., 2003; Pearson, Fernandez, & Oller, 1993).

However, little is known about the narrative skills of Spanish-speaking sequential bilingual children. Sequential bilinguals are children who learn a single language from birth (L1) and begin learning their L2 in later years (Kohnert, Kan, & Conboy, 2010).

These children may exhibit differing levels of competence in the L1 and L2, and because assessments typically measure performance in the L2, educators, including speech–language pathologists, may not be able to determine whether children's low literacy achievement is related to limited L2 proficiency or to specific language learning needs (Gutiérrez-Clellen, 2002). Furthermore, current language proficiency tests used to determine English language proficiency have limited or no validity and, therefore, may not yield accurate estimates of the language proficiencies of these children (Gutiérrez-Clellen, 2002).

Research on the narratives of typically developing ELLs has produced conflicting results. Fiestas and Peña (2004) compared the Spanish and English narratives of 12 Spanish/English balanced ELLs (equally proficient in both languages) between the ages of four and six. An analysis of the stories children told based on wordless picture books showed no differences in overall story grammar ratings (a measure of story structure) between the two languages, although there were some differences in some story grammar elements. Specifically, initiating events and attempts were included more often in Spanish narratives while consequences were included more often in English narratives. No significant differences were found between the English and Spanish narratives in terms of the number of words, the number and length of communication units, or the proportion of grammatical utterances.

Gutiérrez-Clellen (2002) also examined narratives collected from Spanish/English ELLs, however, this study focused on narrative recall and responses to comprehension questions. The 7- and 8-year-old children told Spanish and English stories based on

wordless picture books. Although results indicated that the proportion of grammatical utterances were not significantly different between languages, the analyses of both story recall and responses to comprehension questions, revealed higher scores in English than in Spanish.

Uccelli and Páez (2007) conducted a longitudinal study of narrative skills and vocabulary development in bilingual Spanish/English children with low SES. Participants were assessed at the end of Kindergarten and again at the end of first grade to examine developmental patterns in vocabulary and narrative skills. Narratives were elicited in both languages using a three-picture sequence and scored for narrative productivity (number of words and number of different words) and quality (linguistic and story structure measures). The results revealed significant gains on all English oral language measures, and while there were improvements in English vocabulary scores, the majority of participants still scored below the monolingual mean for first grade. Researchers contributed these results to the effects of low SES status. The only significant gains in Spanish narratives were in narrative story scores. Researchers suggest that the lack of increases in Spanish oral language measures point to language attrition or language loss due to lack of primary language supports.

There has been considerable concern expressed over the past few years about the variable outcomes for reading and school achievement for children learning two languages (August & Hakuta, 1997). This variability may be due to varying levels of language proficiency in each language at school entry or due to factors within an educational program, or social and economic factors could be contributors (Miller et al.,

2006). For ELLs with SLI, the variability may be even more pronounced. Examination of children's oral narratives provides a window into how children integrate multiple systems of language simultaneously (Miller et al., 2006), or it can shed light on difficulties within language systems. Data gathered from such examination can provide educators with information that can be used to develop instructional goals for these children.

The Assessment of Oral Narrative Skills

Speech and language scholars have recommended using oral narratives in assessments of bilingual children (e.g., Fiestas & Peña, 2004; Muñoz et al., 2003; Uccelli & Páez, 2007). Telling a story may be a more familiar task for children from different cultures than formal language testing (Heilman, Miller, & Nockerts, 2010). Analyzing narratives across languages can be an effective way to determine language proficiency in each language and to identify differences in overall linguistic abilities. Weaknesses in either could indicate language impairments (Gutiérrez-Clellen, 2002).

Oral narrative ability can be assessed in two modalities (comprehension and production) and analyzed at two levels (microstructure and macrostructure levels; Westerveld & Gillon, 2008). Analysis of oral narrative production ability at microstructure level can provide an indication of the child's strengths and weaknesses in the spoken language domains of semantics, syntax, and morphology (Westerveld & Gillon, 2008), and includes measures of language productivity: the number of utterances (C-units), total number of words (TNW), mean length of utterance (MLU), and number of different words (NDW; Petersen et al., 2010). Analysis of oral narrative production ability at the macrostructure level targets the overall quality of the oral narrative

(Westerveld & Gillon, 2008). Macrostructural analysis can document a child's ability to relate concepts within a traditional story framework which typically refers to a story grammar structure that includes characters, setting, problem, goal, attempts, resolution and conclusion (Stein &Glenn, 1979). In some research studies this is referred to as a measure of the oral narrative's overall coherence (Davies, Shanks, & Davies, 2004).

Story Grammar as an Intervention

Story grammar is a pattern by which most stories are constructed (Stein & Glenn, 1979). These patterns contain causally and temporally related information most often found in stories (Stein and Glenn, 1979). As previously discussed in Chapter 1, Cognitive Load Theory suggests that the story grammar framework can act as a schema for building a complete story. Narratives generated in classroom activities are judged acceptable when they follow the organizational pattern known as story grammar (Stein and Glenn, 1979), a framework that outlines the salient elements in fictional narratives. Story grammar is what makes stories predictable and comprehensible. Story grammar elements include the characters, setting, initiating event, internal response, plan, attempt, consequence, and resolution of a story. In the school curriculum, narratives generally contain complete episodic constructs. Story grammar and episodic construct indicate macrostructural complexity that reflects narrative proficiency, especially when viewed from an educational perspective (Petersen et al., 2010).

Research studies over the years have examined the use of story grammar as an intervention for students with and without disabilities. In a review of story grammar studies, Diminio, Taylor, and Gersten (1995) suggested that it is not enough to teach

students what story grammar elements are. The instructor must use a clear strategy that consolidates story grammar elements and allows the student to practice telling stories. In addition, the authors of the review recommend that instructors use a progression of teaching strategies, from modeling to guided practice, to independent practice. Goals of story grammar interventions include explicitly teaching the children to recognize story grammar elements within stories and teaching children to correctly incorporate story elements into the stories that they tell or retell (Gersten, Fuchs, Williams, & Baker, 2001).

Review of Relevant Literature

Studies in the literature related to interventions that increase children's ability to tell effective narratives were identified through a systematic process. For the purpose of this review, the researcher conducted a systematic search of the literature related to narrative skill interventions published beginning 2000. To identify studies for inclusion in this review, Academic Search Alumni Edition, Academic Search Premier, Communication and Mass Media Complete, Education Full Text (H.W. Wilson), Education Research Complete, ERIC, PsychArticles, and Psych Info databases were searched using various combinations of the following terms: *narrative, storytelling, intervention,* and *comprehension, narrative skills, story-telling, story grammar, language intervention, comprehension, language impairment, retell, retelling, teaching methods, discourse, therapy, memory, recall, reading, disabilities, English language learners,* and *bilingual*. Next, the researcher conducted an ancestral search of references found in selected articles. The following criteria were used to evaluate articles for inclusion: (a)

published in a peer-reviewed journal, (b) published between 2000 and the present or a seminal study, (c) examined interventions with the purpose of improving participants' narrative skills, (d) included children in a preschool or school or school-like setting (i.e. Head Start) ages 3 to 21 years, and (e) described the findings of quantitative, qualitative, single case, or mixed-method investigations. Studies were eliminated if they did not meet the above criteria or if there were less than three participants.

A total of ten articles were identified for inclusion in this review. A summary of studies included in this review can be found in Table 1. Elements of the selected studies that were analyzed include: (a) characteristics of participants, (b) characteristics of settings, (c) nature of the dependent variables, and (d) intervention delivery. Findings across studies are also discussed.

Research Designs

Of the ten articles reviewed, two used an experimental design, three used a quasi-experimental design, one used a mixed methods design, and four used a single-case design. Two of the single-case design studies used a combination of designs. One study added a pre- post comparison component, and the other study used a mixed group and single-case design.

Characteristics of Participants

Across all studies, a total of 251 participants were included. In all of the studies, researchers either reported the chronological ages of participants or their grade level. Some studies did not report the grade level. As shown in Table 1, ages ranged from three years to eleven years old. Four studies reported inclusion of ELLs in their studies,

Table 2.1

Summary of Studies Included in the Review

Article	**Design**	**Participants**	**Intervention**	**Measures**	**Language Samples**	**Findings**
Cruz de Quiros, Lara-Alecio, Tong, & Irby (2012)	Experimental	N =72 grade 2 Spanish-speaking ELLs in a transitional bilingual program	A structured story reading intervention, Story reTelling and higher order thinking for English Language & Literacy Acquisition (STELLA)	Picture Vocabulary, Listening Comprehension & Passage Comprehension subtests from the Woodcock Language Proficiency Battery-Revised; Naglieri Nonverbal Ability Test (NNAT), SG elements	Story retell in Spanish & in English	Treatment group outperformed comparison group in all 5 SG elements with stronger ability in L1 in 4/5 SG elements. English retellings in both story genres were higher in treatment group. Treatment group showed equal performance for sequence of events in both languages, but control was better in Spanish. Better comprehension for both groups in informational narratives.
Davies, Shanks, & Davies (2004)	Mixed Methods	N = 34 monolinguals in kindergarten and grade 1 Mean age 5-11	Story grammar approach through a collaboration between teachers, speech language therapists, & learning support assistants	SLP's notes on collaboration, structured interviews with teachers & parapros; Renfrew Action Picture Test (RAPT); Bus Story tests	Story retell	Significant improvement in story structure & quantity of information in stories, but no significant change in the number of CUs.

Green & Klecan-Aker (2012)	Quasi-experimental	N = 24 from university laboratory school for students with language LD, ages 6-3 to 9-6	*The expression connection* (Klecan-Aker & Brueggeman, 1991), a SG intervention	number of CUs, words per CU, words per clause and clauses per CU, developmental story level	Story generation with pictures	Significant increase in mean number of CUs & mean developmental story level, indicating greater use of SG elements &greater overall narrative complexity. No significant changes in microstructure.
Hayward & Schneider (2000)	mixed group and single-subject	N = 13 monolinguals with moderate to severe LI enrolled in a language intervention program in a rehabilitation hospital, some comorbid disabilities: ADHD, ASD, CP, ages,4-8–6-4	Explicit teaching of SG elements	pretest; weekly probes; posttest; story information units, SG, episode levels	Story generation with sequential pictures	All participants improved inclusion of relevant story information and in episode complexity. Overall increase in 12/13 participants' inclusion of story information units & episode rating. 7 subjects improved inclusion of story information units but not in the episode level rating or vice versa (story information units). No main effect for listener conditions (familiar/unfamiliar)
McGregor (2000)	Single subject (with pre-	Study 2: N = 26 three & four-year-olds	Study 2: Booksharing with a peer; Study 3	**Study 2:** story elements used in narration; % shared	Story retell with a book	**Study 2:** Preschoolers' models had an influence on their narrations. Significant

	post design)	who speak AAE in Head Start; Study 3: N =14 from study # 2	peer booksharing with clinician prompts	element types between partners; Lexical types (nouns, verbs); % shared lexical types. **Study 3:** NDW, TNW, MLU, # story element types per story		increase in shared story elements & shared lexical types **Study 3:** gains were noted in story element types, length and complexity of narratives. Applied skills to unknown stories.
Nielsen & Friesen (2012)	quasi-experimental	N = 28 kindergarten (5 are ELLs)	storybook-based lessons with vocabulary instruction & story discussion & retell.	Test of Oral Lang Development (TOLD); Test of Narrative Language (TNL; Gillam & Pearson, 2004); vocabulary assessment; story retell rubric score; Expressive One Word Picture Vocabulary Test;	Story retell and story generation with pictures from the TNL	No significant differences between groups on the TOLD semantic composite post-test. No significant differences between groups on TNL post-test, but treatment group gained approximately twice as many NCE points as comparison.
Petersen, Gillam, Spencer, & Gillam (2010)	Single Subject (Multiple baseline across participants and language features)	N = 3 ages 6-3, 6-5, & 8-1 with neuromuscular impairment & co-morbid receptive and expressive LI	Literate Narrative Intervention (LNI), modeling of SG and use of SG icons	(Macrostructure) Modified INC ; episodic construct measure (Microstructure) total # marked & unmarked causal relations; total # temporal adverbial subordinate clauses; total # adverbs;	Picture-cued and verbally-cued narratives	Complexity of narrative microstructure improved. All 3 improved causal relations, adverbs, pronoun references, & elaborative noun phrases. Two subjects increased mental & linguistic verbs, mean # C-units, TNW, NDW. Two subjects increased MLUs.

				elaborated noun phrases; mental & linguistic verbs; % unambiguous pronominal reference cohesion; MLU; NDW; TNW; # C-units		
Schoenbrodt, Kerins, & Gesell, (2003)	experimental	N = 12 Spanish-speakers, ages 6 to 11	Narrative intervention using SG markers (treatment group in Spanish & control in English)	C-units, words, clauses, SG & narrative style	Story retell & story generation (Spanish for treatment & English for control)	SG elements improved for all students in story retell & generation tasks. No improvement in CUs, words per CU, or clauses for either group in story generation. Treatment group significantly improved narrative style for story generation, but not retell.
Spencer & Slocum (2010)	Single Subject (multiple baseline across participants)	N = 5 (1 Spanish-English bilingual & 1Hispanic ELL); mean age 4-6	Explicit teaching of SG elements with retell and generation format	Narrative complexity of story retells, personal experience story generations, & personal stories elicited with conversation elicitation pre- & post, & maintenance assessments measured by the INC Rubric	Story retell & personal generation	All retell scores increased and maintained 2 weeks later. 3/5 participants showed growth in generation of personal experience stories.

Westerveld & Gillon (2008)	Quasi-experimental	N = 20 monolinguals (treatment group: Mixed reading disabilities; control group: 10 TLD)	Teaching of SG elements with story map & retell	Neale Analysis of Reading Ability (NARA); MLCU-M (mean length of C-unit in morphemes), percentage of grammatical CUs, NDW, & story quality from story retell samples; comprehension questions for 'The dragon story' from the TNL.	Story retell without pictures	Treatment group showed a significant effect on oral narrative comprehension. Treatment group did not appear to improve their ability to tell a well-structured story. No effect on semantics or morphosyntax. No improved reading comprehension.

Note. AAE=African American English, ADHD= Attention Deficit Hyperactive Disorder, ASD= Autism Spectrum Disorder, CP= Cerebral Palsy, CU=Communication Unit, INC= Index of Narrative Complexity, LD= Learning disabilities, LI= Language Impairment, MLU= Mean Length of Utterance, NDW=Number of Different Words, SG= Story Grammar, SLP=Speech Language Pathologist, TNW= Total Number of Words

although only two studies had participants who were all ELLs. Four studies reported the inclusion of children with disabilities, although the identification of disability was not always clear or supported with data. Disabilities represented in the studies included: SLI, attention deficit hyperactive disorder (ADHD), Autism Spectrum Disorder (ASD), Cerebral Palsy (CP), spina bifida, and "mixed" reading disabilities.

Characteristics of Settings

As shown in Table 1, research settings varied across studies. One study took place in a laboratory school (Green & Klecan-Aker, 2012). One study was conducted in a rehabilitation hospital (Hayward & Schneider, 2000). Another study was carried out in a Head Start facility (McGregor, 2000), and the majority of the studies were conducted in public school settings.

Nature of the Dependent Variables

In all of the studies reviewed, researchers elicited language samples with a narrative context (i.e. story retells or story generations), and two of the studies elicited samples in both English and in Spanish (Cruz de Quiros et al., 2012; Schoenbrodt et al., 2003). Only six of the ten studies scored the language samples for elements of story grammar. Six of the ten studies scored the samples for microstructure elements (i.e., number of C-units, TNW, number of story events). Three studies used scoring tools: a story retell rubric (Nielsen & Friesen, 2012) and the *Index of Narrative Complexity* (INC; Petersen, Gillam, Spencer, & Gillam, 2010; Spencer & Slocum, 2010).

Intervention Delivery

Interventions used in the reviewed studies had elements in common, but the delivery of the interventions varied. Seven of the studies focused on the use of story grammar elements while the other three focused on book sharing or an intervention package that incorporated vocabulary as part of the treatment. This section will examine the five different categories of intervention delivery method: (a) intervention "packages", (b) use of collaboration, (c) cue cards and story grammar markers, (d) explicit instruction, and (e) use of story maps.

Intervention packages. Four of the studies used intervention "packages" that were composed of multiple components. Cruz de Quiros et al. (2012) analyzed the narratives of 72 Hispanic second grade students with limited English proficiency in order to evaluate the effectiveness of a structured story reading intervention called STELLA (Story reTelling and higher order thinking for English Language and Literacy Acquisition). For students in the treatment group, daily intervention lasted 40 minutes in first grade and 30 minutes in second grade. The intervention, taught in English, incorporated explicit vocabulary instruction, instruction and modeling of story grammar elements, teacher read alouds with interactive conversations, choral reading, story retelling, explicit connections to prior knowledge, sequencing story events, and writing activities. Researchers elicited story retellings (at weeks 21 and 26) in both languages to measure comprehension through story grammar measures. The instructor read the child a storybook and asked him to retell the story, first in English, then in Spanish. Results showed that students who received the intervention outperformed the control group in the

five story elements that were taught (i.e. characters, setting, plot, problem, and solution), and students showed stronger ability in their native language in four of five story elements (not for solution). In addition, they found that ELLs in both groups achieved a higher level of comprehension in both languages on the narrative informational story as compared with the narrative story (narrative informational stories give accurate information on a topic, such as dinosaurs, but are told in narrative story form). Analysis of the interaction effect among group, language and story only identified an interaction effect for language and group in the element of sequence of events. On this story element, treatment students' performance was comparable in both languages; whereas, comparison students' Spanish performance exceeded their English performance.

Green and Klecan-Aker (2012) conducted a pilot study to determine the impact of a narrative intervention conducted in a small group. Twenty-four participants were recruited from a laboratory school for children with language learning disabilities. For thirteen weeks small group intervention was provided for two 30-minute sessions per week. The intervention, called the Expression Connection (Klecan-Aker & Brueggeman, 1991) consisted of story grammar element instruction and modeling of storytelling, starting with three story grammar elements and adding more as the intervention continued. Story grammar components were reviewed by the children and they practiced using game-like activities. Results indicated that the intervention had a significant effect on the mean number of C-units, and a marked improvement in the children's developmental story levels, indicating greater use of story grammar units suggesting a greater overall narrative complexity.

Nielsen and Friesen (2012) investigated the effect of a storybook-based intervention on the vocabulary and narrative development of kindergarteners. Twenty-eight participants, five of which were ELLs, were from high-poverty schools and were all significantly behind their peers in measures of language development and narrative skills. The intervention was delivered through three 30-minute storybook lessons per week for twelve weeks. Intervention strategies included explicit vocabulary instruction and practice, teacher read alouds with and without pictures, discussion of story grammar elements, student retells, and reenactments with puppets. Intervention students made greater gains in vocabulary and narrative skills than did the control group. The description of participants in the study indicates that there were some ELLs in the intervention group, but it is not clear how many ELLs were in the intervention group or if they, in particular, made gains.

Petersen et al. (2010) investigated the effect of a literate narrative intervention on the macrostructural and microstructural language features of the oral narratives of three children with neuromuscular impairments and comorbid language impairment. The Literate Narrative Intervention uses a ten-step process, designed to gradually withdraw support so that participants tell a story independently by the end of a 60-minute session. The intervention included the modeling of storytelling with pictures, the use of story grammar icons, shared story creation, identification of missing story grammar components, and storytelling from stick figure drawings. The same story is repeated throughout the intervention session. The intervention was implemented with each individual child for ten sessions. Results showed that all participants increased their use

of story grammar elements and improved their ability to narrate in complete episodes (macrostructure). All three participants improved their ability to include causal relations in their stories, increased their inclusion of adverbs and elaborated noun phrases as well as their use of pronomial references (microstructure). Two students increased the use of mental and linguistic verbs, C-units, TNWs, and NDW while two students increased MLUs.

Collaboration. Two studies included collaboration as part of the intervention. One of the story grammar studies used collaboration between teachers and language therapists. In this study of kindergarten and first grade students with delayed language development, Davies et al. (2004) used a story grammar approach combined with collaboration between teachers, speech and language therapists, and learning support assistants (LSAs) in the United Kingdom. The purpose of the collaboration component was to provide professional development to help the LSAs understand the basis of the intervention so that they would have an understanding of narrative development and be able to assist the teacher in planning and adapting tasks for children and also be able to respond to children without full reliance on the teaching materials.

Thirty-four children in kindergarten and first grade met for three intervention sessions per week over a "school term." Students were taught story grammar elements and used story grammar cue cards to identify the elements of stories being told by others. In addition, students used puppets and role-play during retells and personal story generation activities. Results suggested a significant improvement in the story structure and in the quantity of information contained in the children's stories from pre to posttest.

In McGregor's (2000) study, collaboration was accomplished through peer-mediated book sharing. Three connected studies were conducted regarding the development and enhancement of narrative skills in preschoolers. The first study was conducted to collect local norms on narrative development of 52 African American English speakers. The second study showed that preschooler's narrative samples could be influenced by the narratives of their peers. In the third study, McGregor tested the effectiveness of a peer intervention on long-term gains in narrative skills. In the third study, two discordant pairs (one participant had stronger abilities than the other) were chosen and age-matched. The student with stronger abilities was assigned the role of the tutor and read stories to the tutee with prompting from the clinician. Next, the tutee retold the story with prompting from the clinician. Ten training sessions were conducted over eight weeks, resulting in gains for both tutees in the number of story element types (i.e. characters, feelings, setting, action, dialogue, coda, additive cohesion, temporal cohesion, and causal cohesion) used as well as length and complexity of the narratives.

Cue cards and story grammar markers. Two additional studies used story grammar cue cards or story grammar markers. Hayward & Schneider (2000) conducted a study with 13 preschoolers who had moderate to severe language impairments to investigate the effects of a narrative intervention using explicit instruction of story grammar components. Participants were enrolled in a language intervention program in a rehabilitation hospital. Intervention activities included the use of story grammar cue cards, identification of missing story grammar components, sorting and sequencing story grammar components, and practice in storytelling and retelling. The morning group had a

two-week baseline period, while the afternoon group had a four-week baseline period. Both groups participated in two 20-minute sessions per week. The morning group received a total of 12 sessions, and the afternoon group received a total of eight sessions. Results revealed that all children showed improvement in the inclusion of relevant story information and episode complexity from pretest to posttest. There was also an overall increase in most children's inclusion of story information units and episode complexity from baseline to the end of the intervention.

Schoenbrodt et al. (2003) found that providing a narrative intervention in the students' native language increased the use and understanding of story grammar elements. Twelve Spanish-speaking ELLs, ages 6 to 11 years, participated in an eight-week pretest/ posttest design investigation with the intervention delivered in Spanish. The control group received the same intervention in English. Intervention strategies included vocabulary instruction and the use of a story grammar marker (a tangible marker with symbols representing story grammar components). While both groups of students showed an increase in the use of story grammar elements in both story retell and story generation, the Spanish intervention group significantly outperformed the English group in narrative style (i.e. grammatical sentences, story cohesion, fluency, staying on the subject) for story generation. There was no significant improvement in CUs, words per CU and clauses in the story retell task for either group.

Explicit instruction with storytelling. Spencer and Slocum (2010) evaluated the effects of a narrative intervention on story retell and personal story generation skills of five preschoolers with narrative language delays. To identify children with narrative

language delays, researchers administered two narrative tasks to participants. They used a norm-referenced story retell and a personal narrative. Children who scored one standard deviation or more below the mean for the retell and included three or less story grammar elements in the personal narrative were included in the study. Using researcher-created stories and story grammar icons, instructors followed six steps. First, the instructor modeled storytelling and matched story grammar icons to a set of pictures taken from the story. Next, participants were each given an icon and had to retell that part of the story, followed by individual retells and story generations. As individuals retold and generated stories, the other participants identified story grammar elements in the stories they were hearing. As a result of the intervention, all participants showed an increase in retell scores, but only three participants showed growth in the generation of personal stories.

Storytelling with story maps. Ten students with mixed reading disabilities were participants in an oral narrative intervention study that aimed to increase students' knowledge of story structure by introducing story grammar elements during small group instruction (Westerveld & Gillon, 2008). A mixed reading disability was defined as having weaknesses in both word recognition and listening comprehension. The intervention focused on listening and oral skills. Intervention sessions addressed the identification and definitions of story grammar elements, listening to stories read aloud, and retelling stories. Story maps and story grammar labels were used to help students with structure and memory of oral narratives. Results indicated that the intervention had a significant effect on the participants' oral narrative comprehension performance, exceeding that of the control group. However, results did not indicate a direct effect on

semantics or morphosyntax; nor did they indicate an improvement in reading comprehension skills on a standardized reading test.

Findings

The findings of the reviewed studies show that narrative interventions that involve the use of story grammar elements are effective for increasing the storytelling abilities of children with and without disabilities who had difficulties in the area of narrative skills. Additionally, findings indicate an increase in narrative abilities for ELLs; however, the two studies with participants that were all ELLs did not include any ELLs with disabilities. Some interventions increased the length of students' narratives; some helped students to include more important information units to produce complete stories that follow conventional patterns, while others enhanced the narrative's complexity.

The current review of the literature also brings to light that there are no empirical studies that examine the effects of narrative interventions for ELLs with SLI in the last fifteen years. This is a gap in the research. Although the research base is growing, there are relatively few empirical studies describing the progression of language development for ELLs who have language impairments and most have focused primarily on morphosyntactic or semantic skills (see Peña & Bedore, 2008 for a review).

The proposed study will address a gap in the research and add to the literature by testing the effects of a narrative intervention on the narrative skills of ELLs with SLI, specifically, an intervention that uses instruction in story grammar components and repeated retellings. In Chapter Three, an in-depth description of the methods that will be used in this investigation will be provided.

CHAPTER THREE

RESEARCH METHODOLOGY

As noted by Cleave et al. (2010), ELLs with specific language impairment (SLI) showed equivalent levels of difficulty in narrative structure and morphosyntactic skills when compared to monolingual English speakers with SLI on narrative measures. When compared to ELLs with typical language development (TLD), ELLs with SLI demonstrate a lower level of narrative skills. The length and content of narratives are reduced and narratives lack details in orientation, evaluation, and action elements (McCabe & Bliss, 2004). Indeed, many ELLs with and without SLI have experienced low academic achievement and more specifically, difficulties in reading and in reading comprehension (Bedore & Peña, 2008; Cruz de Quiros et al., 2012). Oral language proficiency affects academic achievement, because it is associated with subsequent English literacy skills (August & Shanahan, 2006).

A literature review conducted by Petersen (2011) focused on research studies that assessed narrative-based language interventions. He noted that there were no studies that specifically looked at the effects of narrative interventions for ELLs with SLI, although one study included some bilingual participants. The current study addresses the gap in the research by considering the characteristics of ELLs with SLI and how an intervention that emphasizes story grammar and repeated story retellings can improve narrative outcomes for this group of students. This chapter addresses the research methods. This description is presented in eight sections: (a) the guiding research questions, (b) the setting and

participants, (c) the materials, (d) dependent variables, (e) the independent variable, (f) experimental procedures, (g) research design, and (h) the analyses of the data.

Research Questions

The purpose of this study was to examine the effects of a story grammar intervention that used a Story Grammar Marker® and repeated story retells on the oral narrative skills of third and fourth grade ELLs with SLI. Specifically, this study focused on the following research questions:

1. To what extent will third and fourth grade Spanish-speaking ELLs with SLI improve narrative proficiency as measured by the Narrative Scoring Scheme as a result of the story grammar intervention?
2. To what extent will third and fourth grade Spanish-speaking ELLs with SLI increase productivity in their oral narratives as measured by TNW (total number of words) and NDW (total number of different words) as a result of the story grammar intervention?
3. To what extent will third and fourth grade Spanish-speaking ELLs with SLI improve syntactic complexity in their oral narratives as measured by MLUW (mean length of utterance in words) as a result of the story grammar intervention?
4. What are the perceptions of the participants and of the teachers and SLPs who serve the participants in this study regarding the feasibility and efficacy of the story grammar intervention?

These research questions reflect the theoretical framework of this study. The interventionist used the Story Grammar Marker® to explicitly teach story grammar elements to help children develop a schema of narrative story structure. It was expected that by learning the schema during intervention sessions, the children would be able produce successful narratives in generalization sessions without the Story Grammar Marker®. In addition, repeated retells were used during intervention to increase automaticity of the storytelling process in order to decrease the cognitive load.

Setting and Participants

Setting

The research study was conducted in a classroom in a Title One elementary school which houses pre-K –fifth grade classes. The population of the school is approximately 700 students, 85% of which receive free and/or reduced lunch prices and about 27% of which are ELLs. During intervention sessions, participants received one-on-one instruction and sat at a small table beside the researcher in a classroom that was separate from the general education classroom. All data collection for baseline and intervention sessions took place in that setting. Intervention sessions occurred three times weekly for 30 minutes.

Researcher

The researcher is a doctoral candidate in Special Education at Clemson University. She has a Bachelor of Arts degree in Modern Languages and a Master of Education degree in Special Education. She has over fourteen years of experience teaching ELLs. In her Master's and her doctoral program, the researcher has been trained

in the administration and data collection procedures of progress monitoring probes. Her role in this study was to administer pre and posttests as well as progress monitoring measures, provide training to independent observers, and analyze the data. The researcher also served as the interventionist.

Independent Observers

Four independent observers collected procedural data, assessment integrity data, and interobserver agreement for transcriptions and coding. Observer 1 was a college student who was trained to record data on the treatment fidelity checklist used when observing videos of the intervention sessions. During observer training, both the researcher and Observer 1 simultaneously completed treatment fidelity checklists for videorecorded intervention sessions. A total of five intervention sessions were completed. Interobserver agreement was calculated and brought to a level of 100% agreement prior to the beginning of the collection of treatment fidelity data.

Observer 2 was an educator with a PhD. in special education. She was trained to record data on the assessment integrity checklist used when observing videos of progress monitoring and pre and posttest assessments. Both the researcher and Observer 2 completed assessment procedure checklists for videorecorded assessment sessions. A total of five assessment sessions were completed. Interobserver agreement was 100% at the end of five sessions.

Observer 3 was a PhD. candidate in special education at Clemson University who was trained on the segmentation of utterances for the SALT program. In addition, Observer 3 was trained in listening to videorecorded language samples for transcription

errors. With a written copy of the transcript, the observer listened to the language sample while wearing headphones and noted any discrepancies on the written copy. A total of six language samples were completed. Interobserver agreement reached 95% during training.

Observer 4 was a PhD. candidate in elementary education at Clemson University who was trained in the coding of transcripts using the Narrative Scoring Scheme rubric. The researcher had scored language samples using the rubric prior to training sessions. Both the researcher and Observer 4 scored the training transcripts. Then, the researcher collected interscorer agreement. Training continued until interscorer agreement reached 85%.

Participants

Student participants. All Spanish-speaking ELLs in third and fourth grades at the school who had been identified as students with SLI served as the group from which the participants were selected. Consent letters written in Spanish and in English were sent to the parents of all identified students. The consent form explained the study procedures and asked parents for permission for their child to participate in the study. Five students were selected for this study. Selection criteria for participants in this study required that they (a) be identified as a student with Limited English Proficiency (LEP) as determined by an English proficiency composite score of 1-4 (1= prefunctional, 2= beginner, 3= intermediate, 4= advanced) on the English Language Development Assessment (ELDA; American Institutes for Research, 2005), (b) have a Home Language Survey that documents Spanish as the primary language spoken at home, (c) be identified as having a speech-language impairment under IDEA as indicated by a standard score on speech-

language assessments at least one standard deviation below the mean, (d) have hearing within normal limits, (e) be enrolled in third or fourth grade, and (f) had received a score below 20 for Narrative Scoring Scheme (a measure of narrative proficiency) on the pretest language sample. Scores of 0-10 indicate a low level of narrative proficiency, and scores of 11-25 indicate a medium level (SALT Software LLC, 2012). Five students were chosen for the study. Three repetitions are required to meet the standard for a quality study, and the addition of phase repetitions increases the power of the study (Kratochwill & Levin, 2010). The fifth participant moved out of state before he was able to enter the intervention phase of the study. A record review was completed to verify disability and to compile demographic information.

Jose. Jose (pseudonym), a Hispanic male was 9 years and 4 months of age when the study began (See Table 3.1). A student who had repeated his Kindergarten year, Jose was identified as a student with Specific Language Impairment (SLI) in September of 2010, and had not been identified with any other disability. Jose functioned at an ELDA level of 3 and reported speaking both Spanish and English at home. Jose received two 30-minute periods of speech therapy per week, and ESOL services included 45 minute pull-out sessions four days per week Jose was in his fourth year of receiving ESOL services.

Armando. Armando (pseudonym), a Hispanic male, was 10 years and 1 month of age when the study began (See Table 3.1). A student who had repeated the first grade, Armando was identified as a student with a learning disability (LD) and SLI in March of 2013. LD was considered his primary disability. Armando functioned at an ELDA level of 2 and reported speaking both Spanish and English at home. Armando received 45

minutes of daily pull-out special education services for reading and two 30-minute periods of speech therapy per week. Armando received ESOL services on a consultation basis, meaning that his teacher collaborated with the ESOL teacher on teaching strategies and ESOL accommodations in the classroom. Armando was in his sixth year of receiving ESOL services. Armando did not receive pull-out ESOL services.

Erlina. Erlina (pseudonym), a Hispanic female, was 9 years and 6 months of age when the study began (See Table 3.1). Erlina had not been retained in any grade level. She was identified as a student with a LD and SLI in May of 2012. LD was considered her primary disability. Erlina functioned at an ELDA level of 1 and reported speaking both Spanish and English at home. Erlina received two 45 minute periods of daily pull-out special education services for math, reading, and writing and two 30-minute periods of speech therapy per week. Erlina also received ESOL services on a consultation basis, not as pull-out ESOL services. Erlina was in her fifth year of receiving ESOL services.

Eva. Eva (pseudonym), a Hispanic female, was 9 years and 8 months of age when the study began (See Table 3.1). Eva had not been retained in any grade level. She was identified as a student with SLI in April of 2013. Eva functioned at an ELDA level of 2 and reported speaking both Spanish and English at home. Eva received two 30-minute periods of speech therapy per week. ESOL services included 45-minute pull-out sessions four days per week, one-on-one with the ESOL teacher. Eva was in her fifth year of receiving ESOL services.

Table 3.1

Participant Information

Participant	Gender	Age	Grade	Race	Disability	ELDA level
Jose	Male	9:4	3*	Hispanic	SLI	3
Armando	Male	10:1	4*	Hispanic	LD & SLI	2
Erlina	Female	9:6	4	Hispanic	LD & SLI	1
Eva	Female	9:8	4	Hispanic	SLI	2

Note. All participant names are pseudonyms. SLI = specific language impairment; LD = learning disability. * Indicates a participant who has repeated a grade.

Teacher participants. All the teachers that worked with the chosen participants were asked to evaluate the social validity of the intervention. The group of seven teachers consisted of two teachers of English as a Second Language (ESOL), one speech-language pathologist (SLP), one special educator and three general education teachers. In order to participate, teachers and SLPs had to have current certification in their respective fields and work with the student participants in this study.

The group of teachers had a mean of 14.7 years of experience. Six out of seven teachers had Master's degrees in areas that included Spanish, reading, Educational Leadership, Education, and Communication Disorders. All teachers in the study were female and Caucasian.

Materials

Story Grammar Marker®

The Story Grammar Marker® (Mindwing Concepts, Inc., 2013) was used to cue story grammar elements. A story grammar marker is a visual-kinesthetic tool (see Appendix A) made of a two-foot long braid of black yarn. Icons are attached to the yarn braid to represent the elements of story grammar. A head with eyes is at the top to

represent the characters in the story. The next icon is a star and represents the setting of the story. Below the star, a shoe marks the initiating event or the "kick-off" of the story, followed by a heart which symbolizes the internal or emotional response of the character. A small triangle of yarn connects the shoe and the heart and a hand. The hand represents the plan that the character makes to accomplish his goal. The triangle of yarn that connects those three icons is known as the critical thinking triangle. Next, there are five beads in a row strung onto the braid signifying the events in the story. Story events refer to the attempts that the character makes, trying to accomplish his goal. A white bow is tied on the braid below the beads, and it symbolizes the direct consequences of the action ("tying" the story together). Finally, three pink hearts are strung onto the bow, representing the story's resolution. A story resolution usually includes how the character feels at the end or the moral or lesson that was learned.

Books for Assessment

The researcher selected 55 children's storybooks to be used for progress monitoring through story retells. Books were chosen with a Lexile range between 300 and 750. This range covers first through fourth grade reading levels (Saint Paul Schools, 2007). The Lexile Framework, based on sentence length and familiarity of vocabulary, is a linguistic-theory-based method for measuring the reading difficulty of narrative and expository texts (White & Clement, 2001). Lexile levels are an appropriate way to select reading passages for assessment purposes (White & Clement, 2001). In addition, the selected books contained the structural features required for an appropriately complex narrative: (a) at least two characters with specific names, (b) one or more specifically

named settings (e.g., the forest, Disneyland, Mrs. Horner's pet shop), (c) at least one conflict that needs to be resolved, (d) a resolution to the conflict is stated, and (e) two or more distinct events that elicit a response from a character. The researcher masked the words on each page of each book in order to assure that participants retold the story without the help of text.

In order to select books that were appropriate and engaging for the participants, the researcher used the following book list resources: Scholastic's Top 100 Children's Books (Scholastic, Inc., 2013), Pura Belpré Award list (best portrayal of Latino culture; American Library Association, 2013) , Caldecott Medal (excellence in illustrations; American Library Association, 2013) winner's list, Parents' Magazine Best Children's Books list (Meredith Corporation, 2013), the Children's Choice Reading List (International Reading Association, 2013), and the South Carolina Picture Book Award nominees list (South Carolina Association of School Librarians, 2013). Titles of books from these lists were entered into the book search bar on the website for Lexile.com. If the lexile level was between 300 and 750, the title was written on a list of potential books for the study. After the list of potential books was compiled, the researcher found the books in libraries and looked through each book to make sure it met the criteria for the structural features required for an appropriately complex narrative as described above. If the book did not contain all the elements, then it was stricken from the list of potential books. In addition, books that had more than 30 pages of text were also excluded from the list in order to keep progress monitoring sessions short.

Books for Intervention

The researcher selected 15 children's storybooks to be used for story telling practice during intervention sessions. Book selection followed the same procedures as that for the books for assessment with the exception of the length of the books. When selecting books for intervention, books that had more than 40 pages were excluded from the list in order to be able to keep intervention sessions to 30 minutes.

Dependent Variables

The primary dependent variable (DV) for this study was the level of narrative proficiency in oral narratives (story retells). The Narrative Scoring Scheme (NSS; Miller & Heilmann, 2004), a criterion-referenced narrative scoring system was used in this study to calculate an index of the participant's ability to produce a coherent oral narrative through the analysis of transcribed oral narrative language samples. The NSS captures the categories of the story grammar elements as well as narrative language features of cohesion, connecting events, metacognitive/metalinguistic language, and referencing as these are language features used by proficient narrators (Heilmann, Miller, Nockerts, & Dunaway 2010; See Table 3.2 for an explanation of how story grammar elements fit into the NSS rating scale). In a study that compared NSS with three other narrative organization measures (i.e., Plot & Theme, Applebee model, and Stein model), Krippendorff alpha values (Krippendorff, 1980) were calculated. Krippendorff established the following benchmarks for alpha values: ≥0.80 is adequate and values between 0.67 and 0.80 are acceptable for exploratory research and drawing tentative conclusions. Results from the study showed: NSS = 0.79, Plot & Theme = 0.79,

Applebee = 0.61, and Stein = 0.69. In addition, the other measures were more skewed and kurtosis values were noticeably greater for the other three measures (0.9–1.1) than scores from the NSS (0.5), showing that there was a more restricted distribution for the Plot and Theme, Applebee, and Stein measures (Heilmann, Miller, Nockerts, & Dunaway., 2010). Research indicates that NSS scores are a predictor for reading achievement in Spanish/English bilingual children (SALT Software LLC, 2012).

Table 3.2

Alignment of the NSS to Story Grammar Elements

NSS Categories	**NSS Definitions**	**Story Grammar Elements**
Introduction	Depiction of character & setting components	Characters & Setting
Character Development	Acknowledgement of characters & their importance in the story	Characters
Mental States	Frequency & diversity of "mental state words" such as: emotions (angry, happy), cognitive state words (think, believe, know, remember, etc.)	Internal Response
Referencing	Consistent & accurate use of antecedents & proper names	
Conflict/ Resolution	Presence/absence of conflicts & resolutions & how well they are described	Initiating event, Resolution
Cohesion	Sequencing of, details for, and transitions between each event	Initiating event, plan of action, attempts
Conclusion	Conclusion of the final event as well as the wrap-up of the entire story	Consequences

The NSS is a component of the Systematic Analysis of Language Transcripts (SALT; Miller & Iglesias, 2012) software program and was used to score oral retell transcripts. Scorers were trained on using the NSS scoring rubric and entered NSS scores into the SALT program for each characteristic of the NSS. The NSS uses a 0-5 point scale. Five points are given for proficient use, three for emerging or inconsistent use and one point for minimal use of a category. Zeroes are given for telling the wrong story or refusing to tell the story. Scores of two and four are given for intermediate performance (See Appendix B for the NSS rubric). NSS scores may range from zero to 35 points.

Three other DVs were measured in this study. First, total number of words (TNW) was counted as a measure of narrative productivity. Narrative productivity, or the amount of language used by a child, is one indicator of language knowledge and can be measured as the amount of language generated in a set period of time (Bedore et al., 2010). Only words in complete and intelligible utterances were counted. No words were counted in interrupted or abandoned sentences or in sentences that contained unintelligible words or segments. Both Spanish and English words were counted. Sound effects and nonwords were not counted.

Second, total number of different words (NDW) was calculated as a measure of narrative complexity and narrative productivity. NDW is a direct measure of vocabulary diversity (Miller, Andriacchi, & Nockerts, 2011). Each word that was used in a transcript was only counted once. Again, words were only counted in complete and intelligible utterances. Narrative productivity was based on the TNW and NDW. TNW and NDW both tend to increase with age in typically developing children (Bedore et al., 2010).

The third DV was the mean length of utterance in words (MLUWs). MLU is a measure of syntactic complexity and correlates significantly with age in English (Miller, 1987) and in Spanish (Echeverría, 1979). MLUW was selected as a sentence-level measure of amount of language and was calculated as the average number of words per utterance. MLUWs were calculated for complete and intelligible utterances by counting the TNW for the speaker and dividing it by the total number of utterances (as defined by C-unit segmentation rules; Miller et al., 2006). Mean length of utterance in words (MLUW), rather than morphemes, was selected because the measure of morphemes minimizes the impact of potential dialectical differences related to Spanish-influenced English. For example, a participant who might say "The boy walk home after the game," would be penalized for the dialectical omission of the morpheme, –ed, if MLUs were being measured in morphemes.

Microstructural language measures (e.g., MLU, NDW) and story grammar elements of narratives have a strong connection (Berman & Slobin, 1994). As narrators relate the more complex parts of a story, they are required to use more complex language to construct the story in a manner that makes sense. For example, most stories have an initiating event which causes an internal response in a character. These two parts of stories frequently occur close together and often require the use of complex syntax to describe causal concepts (e.g., "He made a plan because he was afraid to be left alone…"). The more story grammar elements that are included in a narrative, and the better they are connected, the more microstructural measures may increase.

All DVs were coded and scored using the Systematic Analysis of Language Transcripts (SALT) software program (Miller & Iglesias, 2012). The SALT provides a standardized process of language sample analysis which gives consistent and reliable measures of oral language (Miller et al., 2011). The databases used in the SALT provide a broad range of measures of vocabulary, syntax, semantics, discourse, rate, and fluency that can identify strengths and weaknesses for clinical populations, which provides insight into areas of language production that may require intervention (Miller et al., 2011). A 2006 study by Miller et al. found significant correlations between several measures of oral narrative skill (i.e. MLU, NDW, words per minute, and the NSS) and reading achievement of children in both English and Spanish. Oral narrative skills were positively correlated with the reading scores. In fact, measures of oral narrative skill used in story retell elicitations predicted reading scores better than the Woodcock Language Proficiency Battery, Revised: English and Spanish (1991).

Language samples were transcribed into the SALT program. The transcriptionist was responsible for segmenting the sample into the communication units. Accuracy of communication unit segmentation was confirmed by interobserver agreement procedures. Scores for the narrative proficiency measure (the NSS) were also entered into the SALT program and checked for interobserver agreement. A standard measures report was run using the SALT software program which counted the TNW, NDW, and MLUWs for each transcript.

Independent Variable

The narrative intervention used in this study was an adaptation of the procedures used in Petersen et al.'s (2010) study which was an adaptation of the Functional Language Intervention Program for Narratives (FLIP-N; Gillam, Gillam, Petersen, & Bingham, 2008). The adapted intervention consists of five steps per intervention session (See Appendix C). These steps include the instructional model of teacher explanation and modeling, guided practice, and independent practice. All stories during all steps of the intervention were supported by the illustrations in the storybooks, and one storybook was used over three intervention sessions.

During each intervention session the interventionist began by explaining or reviewing the story grammar elements, using the Story Grammar Marker (SGM) as a visual support. Then, the interventionist modeled the telling of the story and pointed out the elements of story grammar on the SGM during the storytelling. Following, the interventionist and the child reviewed the story grammar elements particular to the story they had just read. Next, the child and the interventionist co-told the story, again, indicating the story grammar elements used as they happened in the story. Finally, the child retold the same story without the aid of the SGM, but with the support of book illustrations.

Experimental Procedures

Pre-Intervention Phase

One week prior to the beginning of the study, a story retell language sample of *Frog Where Are You*? (Mayer, 1969) was elicited from all potential participants, using

the elicitation protocol and story script from the SALT. The purpose of the pretest measure was to include a standardized measure that was also culturally responsive and to be able to compare it to a posttest measure to look for significant differences. Moreover, this comparison to the database allowed the researcher to compare the participants' results with those of typically-developing children of the same language background and the same age. Each transcript was compared with the bilingual database in the SALT software program and was evaluated for narrative proficiency, TNW, NDW, and MLUs. Five children who fit the criteria were chosen for the study. One of the participants moved out of state during the baseline phase. The remaining four participants completed the study.

Baseline Phase

During the baseline phase, the researcher elicited language samples in the form of story retells. Story retell prompts came from the 55 books selected for progress monitoring purposes. Two techniques were used to help control for interaction effects (Kennedy, 2005): text masking and randomization of book selection for progress monitoring books. All text was masked in all of the books so that children were not able to tell the story by reading the text. Books were randomly assigned to each child for each assessment probe. Using a random number generator website, the researcher generated a random list of numbers for each participant from a possible 55 books. Each book received a number. For each assessment session, a book was chosen for each participant from their random number list.

During the baseline phase, none of the participants received instruction in the eight story grammar elements, nor did they use a story grammar marker. One participant, Eva, was receiving instruction in summarizing stories. No training, coaching, or prompts were provided to the participant. The researcher used the elicitation protocol from the SALT (Miller et al., 2011) and said, *"I would like to find out how you tell stories. First, I am going to tell you a story while we follow along in the book. When I have finished telling you the story, it will be your turn to tell the story using the same book."* Next, the researcher read the scripted story to the participant while the participant followed the pictures of the story. When the story was finished, the participant was asked to retell the story using the pictures in the book. The story retell (language sample) was recorded and transcribed.

Intervention Phase

Once baseline was stabilized, the first participant began the story grammar intervention. Sessions lasted 30 minutes and occurred three times weekly in addition to regular daily instruction. One storybook was used for every three intervention sessions (See Appendix C for a list of procedures). The rationale for implementing the intervention for 30 minutes three times a week came partially from the literature review for this study. The majority of the studies in the literature review that reported the duration of the intervention, used 30 minute sessions. In addition, the IES guide for effective teaching of language and literacy for ELLs, Gersten et al. (2007) recommend that intervention programs be implemented daily for at least 30 minutes. Participants in this study also received intensive intervention (i.e., speech therapy services and ESL

services) two days a week or more, and with the addition of this intensive intervention for three days per week, they received intensive language and literacy interventions each school day.

All intervention sessions began with a progress monitoring probe (a story retell) administered in the same manner as they were administered in baseline. Retells were elicited at the beginning of each session to control for effects from the intervention session. Elicitation procedures were the same as those used during baseline. Retells were recorded and transcribed. Books for progress monitoring were selected randomly from the 55 progress monitoring books.

During the story grammar intervention phase, the researcher began each session by using a story grammar marker to first introduce, then explain and review, story grammar elements (See Table 3.3). Next, an intervention book was selected for use over three intervention sessions. The researcher told the story to the participant as the participant followed along, looking at the illustrations in the book. The researcher told the story from a script that was not visible to the participant. As the researcher told the story, she marked the story grammar elements on the SGM with small post-it notes. The story grammar marker served as a visual-kinesthetic framework to help the participant remember all the story grammar elements to include. Next, the researcher and the participant reviewed the story grammar elements that were specific to the story that was being read. Then, the researcher and the participant co-told the story with the support of the story illustrations, and the story grammar elements were marked on the SGM during the co-telling. The researcher provided support in the form of referring to the SGM,

prompting by pointing to the illustration, asking what happened next, and redirecting when events were out of order. Lastly, the participant independently told the story one more time while looking at the illustrations, but without the use of the SGM.

During the intervention phase, none of the participants received instruction in the eight story grammar elements, nor did they use a story grammar marker. Participants received "business as usual" instruction in the general education classroom. One participant, Eva, was receiving instruction in summarizing stories.

Table 3.3

List of intervention steps

Intervention Steps:
1. Explanation/review of story grammar elements, using SGM 2. Instructor tells story with illustrations & marks SGM (modeling) 3. Instructor & participant review the story grammar elements specific to the current story 4. Instructor & child co-tell story with illustrations & mark SGM (guided practice) 5. Child tells story with support from illustrations, but no SGM (independent practice)

Post Intervention

One week after the intervention phase a story retell language sample of *Frog Where Are You?* (Mayer, 1969) was again elicited from all participants, and their transcripts were compared with the bilingual age-matched peers database in the SALT software program. Transcripts were evaluated for narrative proficiency, TNW, NDW, and MLUs. Pre- and posttest measures were compared to test for significant differences.

Treatment Fidelity

Procedural Reliability

Procedural reliability data were collected for 20% of the intervention sessions across participants by an independent observer using a procedure checklist (See Appendix D) while viewing videos of intervention sessions. On the procedure checklist, every step of the intervention was listed, and the observer indicated that a step was completed by circling "Y" for "yes" and indicated that the step was omitted by the interventionist by circling "N" for "no". Overall treatment fidelity was rated 97% (range 80% to 100%). Sessions with lower treatment fidelity rates were sessions that were implemented at the beginning of the study.

Assessment Integrity

All assessment integrity data was collected by an independent observer using the Language Sample Elicitation Procedure Checklist (See Appendix D). The observer viewed videos of assessment sessions in order to complete assessment procedure checklists. Assessment integrity data was collected on 20% of all assessment sessions across all participants and all phases. Assessment integrity data was also collected on 100% of the pre and post assessments. All six steps of the assessment was listed on the assessment procedure checklist. The observer indicated that a step was completed by circling "Y" for "yes" and indicated that the step was omitted by the interventionist by circling "N" for "no". Assessment integrity was determined by dividing the number of correct steps by the total number of correct and incorrect steps and multiplying by 100. Overall the mean for assessment integrity was 98.9% (range 83.3% to 100%).

Interobserver Agreement

Transcriptions. The researcher transcribed all the language samples, and a trained independent observer reviewed 20% of the samples. With a written copy of the transcript, the observer listened to the language sample and noted any discrepancies on the written copy. Transcripts were assessed for the accuracy of the transcriptions, overlap of transcribed words and C-unit boundaries. Those utterances on which there was disagreement with respect to segmentation or transcription were noted. Disagreements were resolved by consensus between the researcher and the observer. Word-by-word agreement was recorded by the researcher for each transcript and calculated using the following formula: number of agreements, divided by the number of agreements plus disagreements, multiplied by 100. Overall interscorer reliability was rated 99.6% (range 94.8% to 100%).

Coding. The researcher coded all transcripts for the NSS score, and a trained independent observer, reviewed 20% of the language sample transcripts. Agreement data was collected by the independent observer using direct observation of 20% of the coded transcripts. Item-by-item agreement (Tawney & Gast, 1984) was recorded by the researcher for each transcript. An agreement was recorded if both the researcher and observer identically scored the item (0, 1, 2, 3, 4, or 5). A disagreement was recorded if the task was not scored identically. IOA was calculated by dividing the number of agreed items in each characteristic category across transcripts divided by the number of agreed and disagreed items, and multiplied by100. Overall the mean reliability for NSS coding

was 89.1% (range 82.7% to 97%). Mean reliability data for each category of the NSS is included in Table 3.4.

IOA was not necessary for MLU, TNW, or NDW because these measures were counted by the SALT software program according to the transcripts. IOA was calculated for transcribing of the language samples.

Table 3.4

Percentage of Interobserver Agreement for the Characteristics of NSS.

Characteristic of NSS	Percent of Interobserver Agreement
Introduction	86%
Character Development	97%
Mental State Words	93%
Referencing	82.7%
Conflict Resolution	82.7%
Cohesion	89.6%
Conclusion	93.1%

Social Validity

Social validity is a measure of the satisfaction participants experience in relation to an intervention, and it can also refer to the appropriateness or effectiveness of an intervention (Kennedy, 2005). Social validity in this study was evaluated through two different surveys to both direct consumers (participants) of the intervention and indirect consumers (teachers of the participants).

Student participants. At the conclusion of the study, participant satisfaction was evaluated through a survey. Student participants were asked questions one-on-one by an independent observer regarding the need for the intervention and the efficacy of the strategies they learned.

Teacher and therapist participants. The general education teachers, the special education teacher, the ESOL teachers and Speech Language pathologists (SLP), were given a copy of the social validity questionnaire and asked to watch a video-recorded intervention session. At the conclusion of the demonstration lesson they completed a survey with questions regarding the ease of implementation and perceived efficacy of the story grammar intervention. Surveys (Appendix E) were analyzed, using a descriptive analysis and based on Likert scale scores and emerging themes.

Research Design

The current study used a single case design. A multiple-probe across participants design (Kennedy, 2005) was used to determine the effects of the narrative intervention on story retells for ELLs with SLI. A single case design was chosen due to the particular population of focus in the study. The population of ELLs with SLI is a low incidence population. Multiple baseline is also an appropriate design to use when it is not possible for participants to return to baseline conditions. Additionally, the DVs in this study can be measured repeatedly which made this design an appropriate choice. In contrast to a multiple baseline design, in which baseline data are collected throughout the baseline condition, in a multiprobe baseline design, probes are collected intermittently during baseline. In this study, a multiprobe design was used to reduce practice effects of storytelling (Kennedy, 2005). All participants continued to receive their regular classroom reading instruction with their general education teacher, ESOL services, and speech-language services from their speech-language pathologist during the study. Two

participants also received special education services for reading support. No participants received any other specialized interventions.

Once there were at least five baseline data points and the data demonstrated a stable and predictable pattern documenting low narrative complexity (NSS score), the participant with the greatest need entered the intervention phase. Additional baseline probes were administered prior to the start of intervention phase for the next participant. When the first participant had at least five data points with low variability in the intervention phase, the second participant entered the intervention phase if they showed a predictable pattern in baseline with low variability and no positive trend line. Any subsequent participants entered the intervention phase according to the same criteria for the participant who entered the phase before them.

Data collection

During each session, data was collected and recorded by the researcher at the beginning of the intervention session. All oral narrative language samples were video-recorded with a Canon Vixia HFR100 camera and transcribed by the researcher, using standard SALT conventions (Miller, Andriacchi, & Nockerts, 2011). Utterance segmentation was based on communication units (CUs), using Loban's (1976) rules of including a main clause and all of its subordinate clauses. For example, for a sentence such as, the dog chased the cat up the tree and barked, would be segmented as one CU. If, on the other hand, the sentence were, the dog chased the cat up the tree and he barked a lot, the sentence would be segmented as two CUs because there are two independent clauses. The researcher segmented the language sample into CUs as she transcribed the

sample. Accuracy was checked by interobserver agreement procedures as described below. Only complete and intelligible (C&I) utterances were used for analysis; interrupted and abandoned sentences in the transcripts were excluded, as well as utterances containing unintelligible segments.

Data Analysis

Graphic data on the participants' performance during baseline and intervention phases of the study were recorded on line graphs. As recommended in procedures outlined by Kennedy (2005), line graphs were examined for three different dimensions: level, trend, and variability. The level of the dependent variable refers to the average of the data and is typically calculated as the mean or median. The mean for each DV was calculated for the level for each participant in each phase. Examining the level of the data allows for comparison of patterns between phases. Next, the trend of the data refers to the upward or downward slant of the best-fit straight line that can be placed over the data points in a phase. Trend for each phase and each participant was evaluated as either positive or negative. The variability of the data refers to the degree that the data points deviate from the trend line and can be measured as high, medium, or low. Low variability was evaluated in order to make decisions to move participants into the intervention phase.

Kennedy further recommends visual inspection of the data for patterns occurring between phases by examining the immediacy of effect and the overlap of data between phases. The immediacy of effect refers to how quickly a change in the data pattern occurs between phases. The overlap of data is the percentage or degree to which data in adjacent phases share similar quantitative values. The percentage of nonoverlapping data (PND)

determines the proportion of data points in a treatment condition that exceeds the extreme value in the baseline condition (Mastropieri & Scruggs, 1998). PND values over 90% indicate a highly effective treatment. Likewise, values of 70 to 90 are effective, values of 50 to 70 are questionable, and values below 50 are regarded as an ineffective treatment (Mastropieri & Scruggs, 1998). PND was calculated for each participant on each DV.

In addition to visual analysis, pre- and posttest assessment data was tested for significant differences using a paired *t*-test. This statistical test procedure was used because a test of normality indicated a normal distribution for these data sets. Language samples that were elicited in the pre- and post-intervention phases were transcribed and coded for narrative proficiency, TNW, NDW, and MLUWs then compared to the bilingual age-matched database. Differences from pre to post are reported in chapter four.

Social Validity

For participant social validity, the ratio of students who agree (yes) to students who disagree (no) with each aspect of the participant questionnaire was reported. For teacher social validity, a mean Likert scale score was calculated for each question on the questionnaire (See Appendix E).

CHAPTER FOUR

RESULTS

The purpose of this study was to examine the effects of a story grammar intervention that used a Story Grammar Marker® and repeated story retells on the oral narrative skills of third and fourth grade ELLs with SLI. The research questions were:

1. To what extent will third and fourth grade Spanish-speaking ELLs with SLI improve narrative proficiency as measured by the Narrative Scoring Scheme as a result of the story grammar intervention?
2. To what extent will third and fourth grade Spanish-speaking ELLs with SLI increase productivity in their oral narratives as measured by TNW (total number of words) and NDW (total number of different words) as a result of the story grammar intervention?
3. To what extent will third and fourth grade Spanish-speaking ELLs with SLI improve syntactic complexity in their oral narratives as measured by MLUW (mean length of utterance in words) as a result of the story grammar intervention?
4. What are the perceptions of the participants and of the teachers and SLPs who serve the participants in this study regarding the feasibility and efficacy of the story grammar intervention?

This chapter will present the results the study. These results are presented in six sections: (1) results related to narrative proficiency, (2) results related to narrative productivity, (3) results related to syntactic complexity, (4) results related to pre and

posttest language samples, (5) results related to social validity, and (6) a summary of the findings.

Narrative Proficiency

Narrative proficiency, the primary dependent variable for this study, was measured using the Narrative Scoring Scheme (NSS; Miller & Heilmann, 2004), a criterion-referenced narrative scoring system, that gives an index of the participant's ability to produce a coherent oral narrative. Graphic data on the participants' performance during baseline and intervention phases for narrative proficiency are presented in Figure 4.1. These data are also summarized in Table 4.1 and are expressed as participants' mean and range scores across all phases.

Narrative Scoring Scheme (NSS)

In order to describe the effects of the intervention, visual analysis was used to examine changes in the data within and between conditions, including differences in level. Visual inspection of the data indicates that all four participants showed a change in level for NSS scores after implementation of the story grammar intervention (See Figure 4.1). Level was calculated as the mean within a condition. Inspection of the baseline and intervention phases shows an increase in narrative proficiency for all participants. Jose obtained a mean of 10 for NSS during baseline (range 9 to 11) and increased to a mean of 17.6 during intervention phase (range 7 to 25). Armando obtained a mean of 12.3 for NSS during baseline (range 9 to15) and increased to a mean of 19.5 during intervention phase (range 15 to 25). Erlina obtained a mean of 14.5 for NSS during baseline (range 11 to17) and increased to a mean of 21.7 during intervention phase (range 19 to25). Eva

obtained a mean of 9.7 for NSS during baseline (range 9 to 15) and increased to a mean of 16.5 during intervention phase (range 9 to 23). All participants increased their mean overall NSS scores by approximately seven points from baseline to intervention.

Inspecting the level of data between phases also provides information about the immediacy of the intervention effect. The more immediate the effect, the more convincing is the functional relation between the variables (Kennedy, 2005). Data for both Armando and Erlina showed an immediate effect. There was a clear level and trend change for both participants as soon as the intervention was implemented. For Jose, the change was not as immediate. The first two intervention sessions did not show an immediate effect, however, by the third intervention session the effect was observable. For Eva, there was an immediate change in the first intervention session, but her performance level overlapped with baseline levels for the next two sessions. Thereafter, a positive effect was observable.

Trend refers to the line of best-fit that can be placed over the data within a phase (Kennedy, 2005). Inspection of the trend of the data indicated that three of the four participants (Jose, Erlina, and Eva) had positive trendlines for narrative productivity throughout the intervention. Armando's trendline, however, showed a slight negative trend throughout the intervention phase, maintaining an overall higher level in intervention than he had in baseline.

The percentage of non-overlapping data (PND) was calculated for NSS. PND values over 90% indicate a highly effective treatment (Mastropieri & Scruggs, 1998). Likewise, values of 70 to 90 are effective, values of 50 to 70 are questionable, and values

below 50 are regarded as an ineffective treatment (Mastropieri & Scruggs, 1998). One participant, Erlina, had 100% PND indicating that for her the intervention was highly effective. PND values for Jose and Armando indicate an effective intervention (84.4% and 87% respectively). For Eva, PND values were questionable at 62.5%.

Table 4.1

Participant Mean and Range Scores during Experimental Conditions

	Dependent	Baseline		Intervention		
Participant	Variable	Mean	Range	Mean	Range	PND
Jose	NSS	10	9-11	17.6	7-25	84.4%
	TNW	185	122-312	195	98-287	0%
	NDW	73	52-102	71	45-102	0%
	MLUW	6.64	5.55-7.85	7.14	5.09-9.92	22%
Armando	NSS	12.3	9-15	19.5	15-25	87%
	TNW	273	236-328	257	136-515	22%
	NDW	99	84-116	95	53-152	22%
	MLUW	7.1	6.27-7.77	8.1	6.96-9.83	61%
Erlina	NSS	14.5	11-17	21.7	19-25	100%
	TNW	185	125-291	246	161-313	71%
	NDW	73	53-109	90	58-125	21.4%
	MLUW	6.6	6.14-7.10	7.65	6.22-8.72	78.6%
Eva	NSS	9.7	9-15	16.5	9-23	63%
	TNW	115	71-165	137	99-228	25%
	NDW	52	40-68	59	48-76	25%
	MLUW	5.57	4.18-6.73	5.87	5.23-6.55	0%

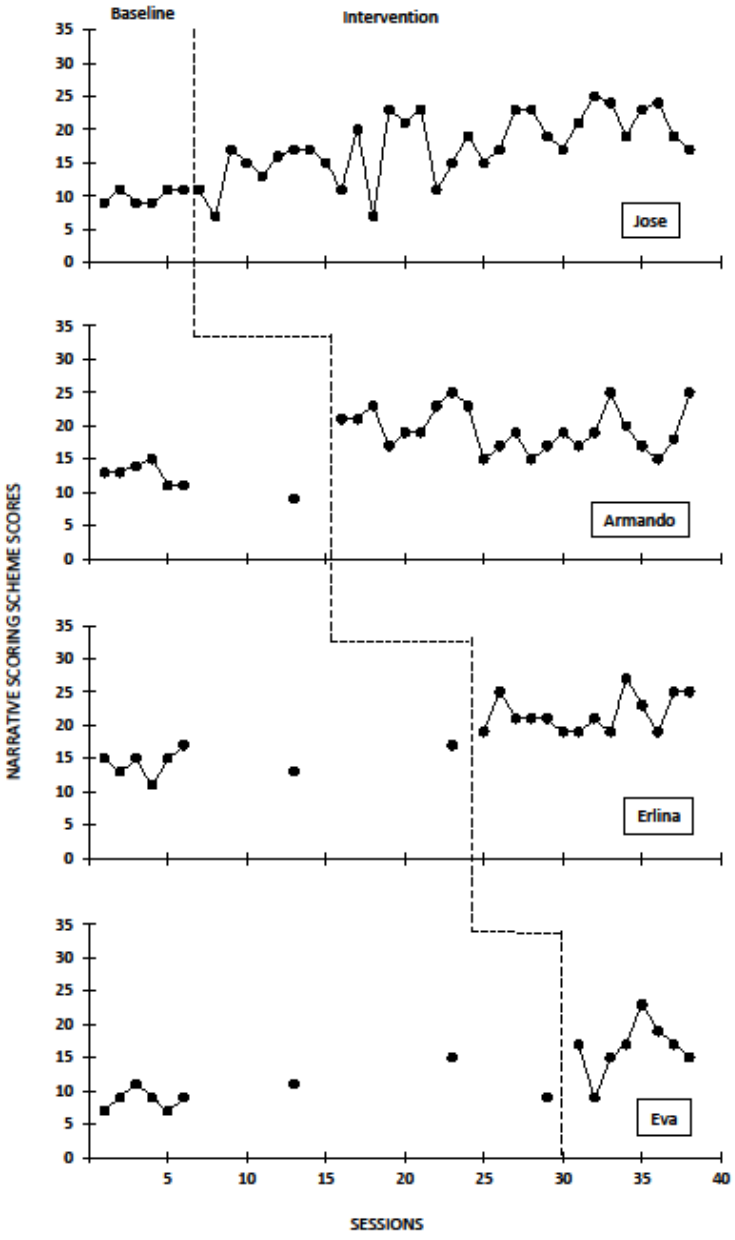

Figure 4.1. Narrative proficiency scores for each story retell probe.

Analysis of the individual categories of the NSS showed some notable patterns. The following is an analysis of each individual category within the NSS.

Introduction. In the category of introduction, scores are determined by the presence of elements of the story's setting and characters (Miller et al., 2011). Most participants maintained scores of 3 for introduction throughout the intervention phase (See Figure 4.2). A score of 3 indicates that the speaker stated the setting and named the characters but did not give sufficient detail for either. In the category of introduction, Eva and Jose had better results during the second half of the intervention phase. For introduction, baseline score averages ranged from 1.29-2.13 across participants and increased to a range of 1.75-2.74 during intervention.

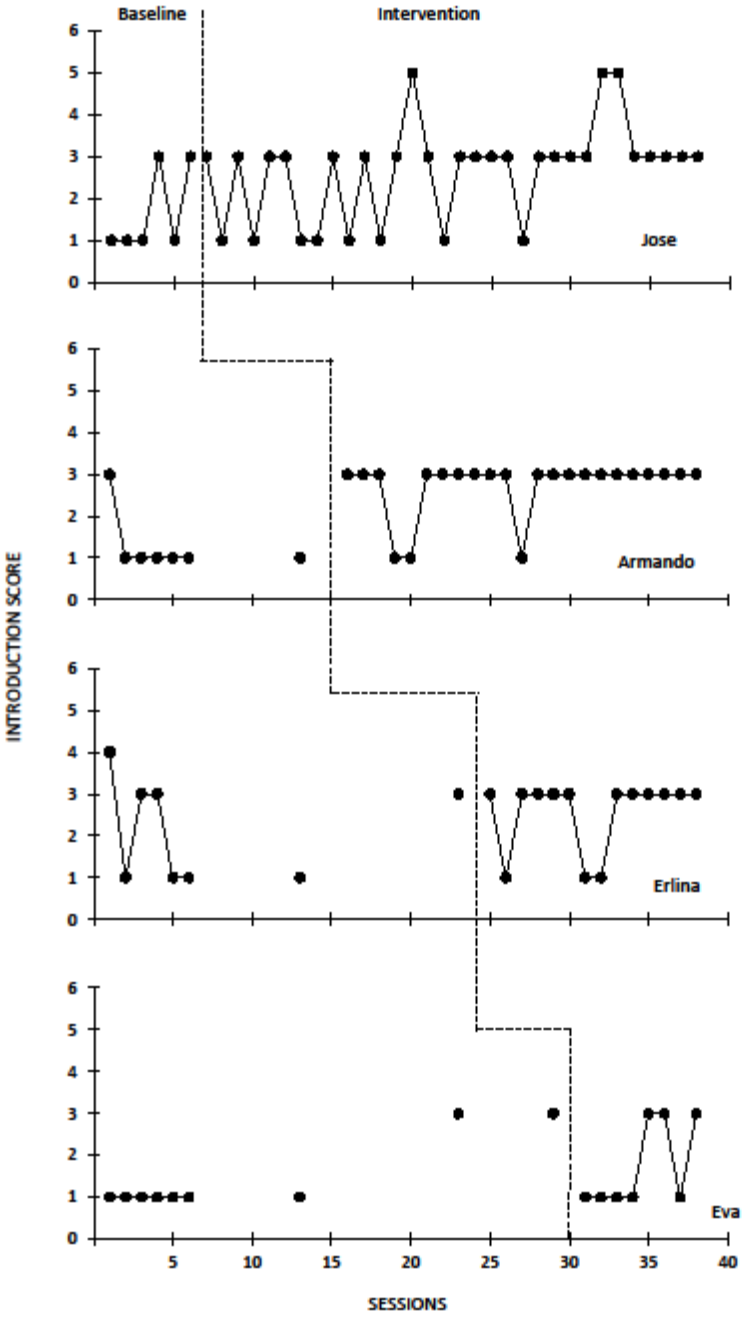

Figure 4.2. Narrative proficiency scores for the characteristic of *introduction.*

Character Development. In the category of character development, scores are based on knowledge of characters and their level of significance in the story (Miller et al., 2011). Most participants maintained baseline levels during intervention for character development (See Figure 4.3). Erlina had three scores of 5 for character development during intervention. A score of 5 reflected Erlina's ability to narrate in the first person during her story retell. Armando's scores for character development plummeted at the end of intervention. For character development, baseline score averages across participants ranged from 1.89-3 and increased to a range of 2.5-3.43 during intervention.

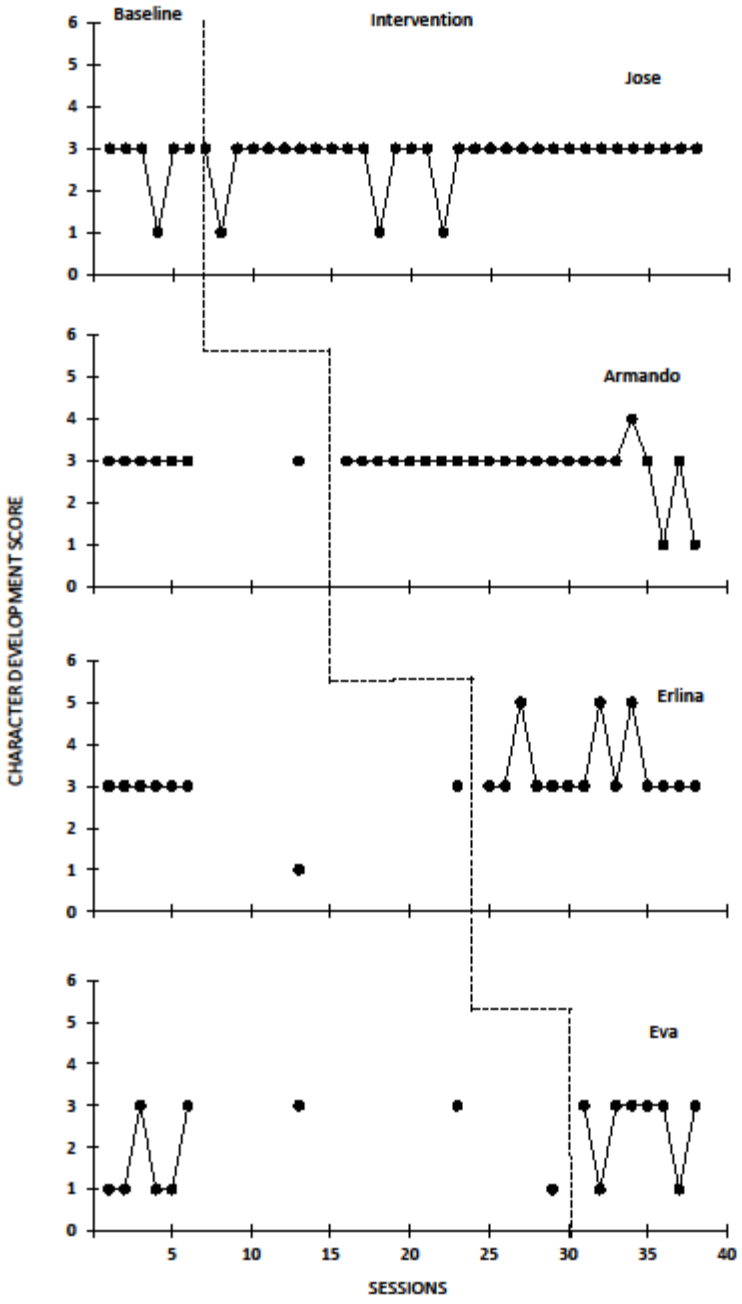

Figure 4.3. Narrative proficiency scores for the characteristic of *character development.*

Mental States. The expression of characters' mental states is a skill used by proficient storytellers (Miller et al., 2011). Mental state scores evaluate the frequency and diversity of mental state words used in the story. Mental state words include various versions of words such as *think, say, feel,* and *know.* In this category, Armando used more mental state words in the first half of intervention than in the second half, and Eva only increased her score for mental states in less than half of her intervention sessions (See Figure 4.4). Jose and Erlina fluctuated mostly between scores of 1 and 3. For mental states, baseline scores ranged from 1.22-3 and increased to a range of 1.75-2.74 during intervention across participants.

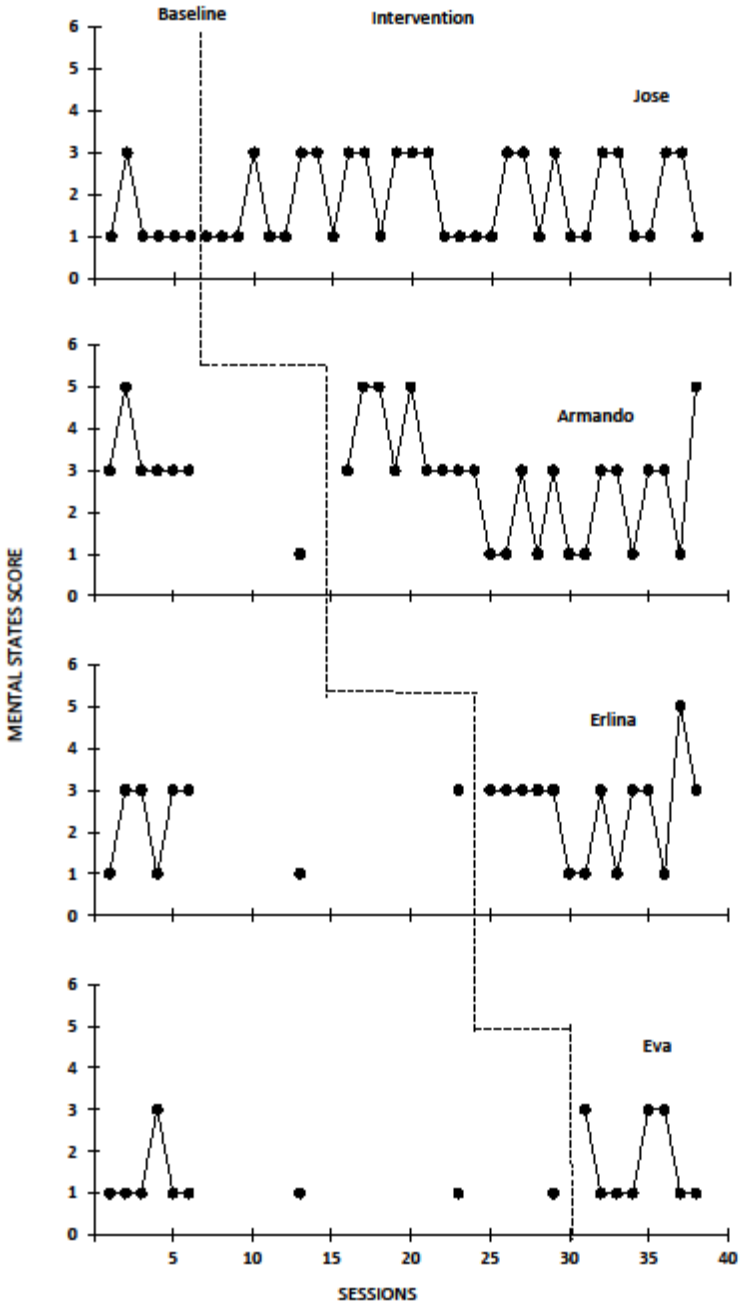

Figure 4.4. Narrative proficiency scores for the characteristic of *mental states.*

Referencing. The referencing score indicates a speaker's ability to consistently and accurately provide pronoun references and clarifiers throughout the story (Miller et al., 2011). Eva showed good referencing skills through intervention (See Figure 4.5). Armando and Erlina had variable results for referencing, and Jose showed a large improvement in the referencing category after 12 intervention sessions. For referencing, baseline scores across participants ranged from 1.33-1.75 and increased to a range of 2.39-3.75 during intervention.

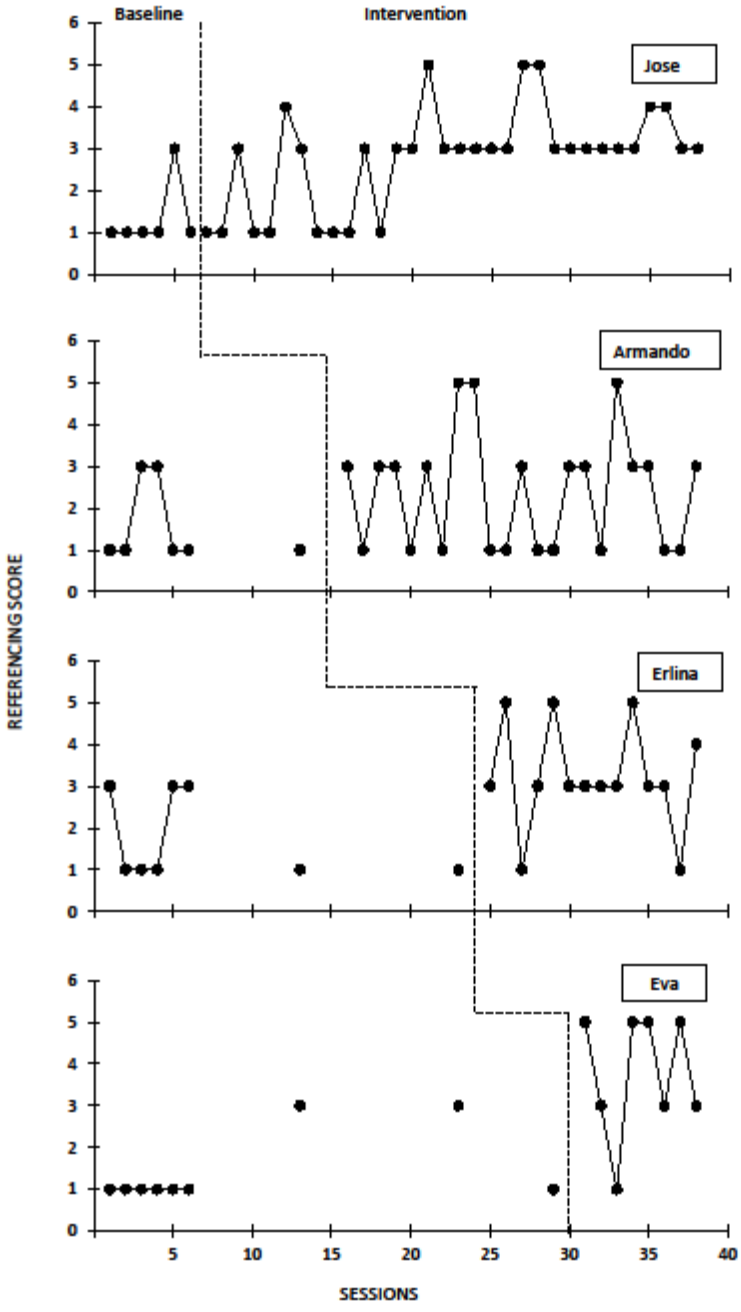

Figure 4.5. Narrative proficiency scores for the characteristic of *referencing*.

Conflict Resolution. Scores for conflict resolution are based on the presence of the conflicts and resolutions of those conflicts throughout the story (Miller et al., 2011). All participants improved in this category, achieving levels above baseline levels during the intervention phase (See Figure 4.6). Jose showed more consistent results at a higher level towards the end of intervention. Armando's and Erlina's performances in conflict resolution were fairly consistent throughout intervention. After the first two intervention sessions, Eva had a consistent increase. In conflict resolution, baseline scores averages across participants ranged from 1- 1.57 and increased to a range of 2.5-3.36 during intervention.

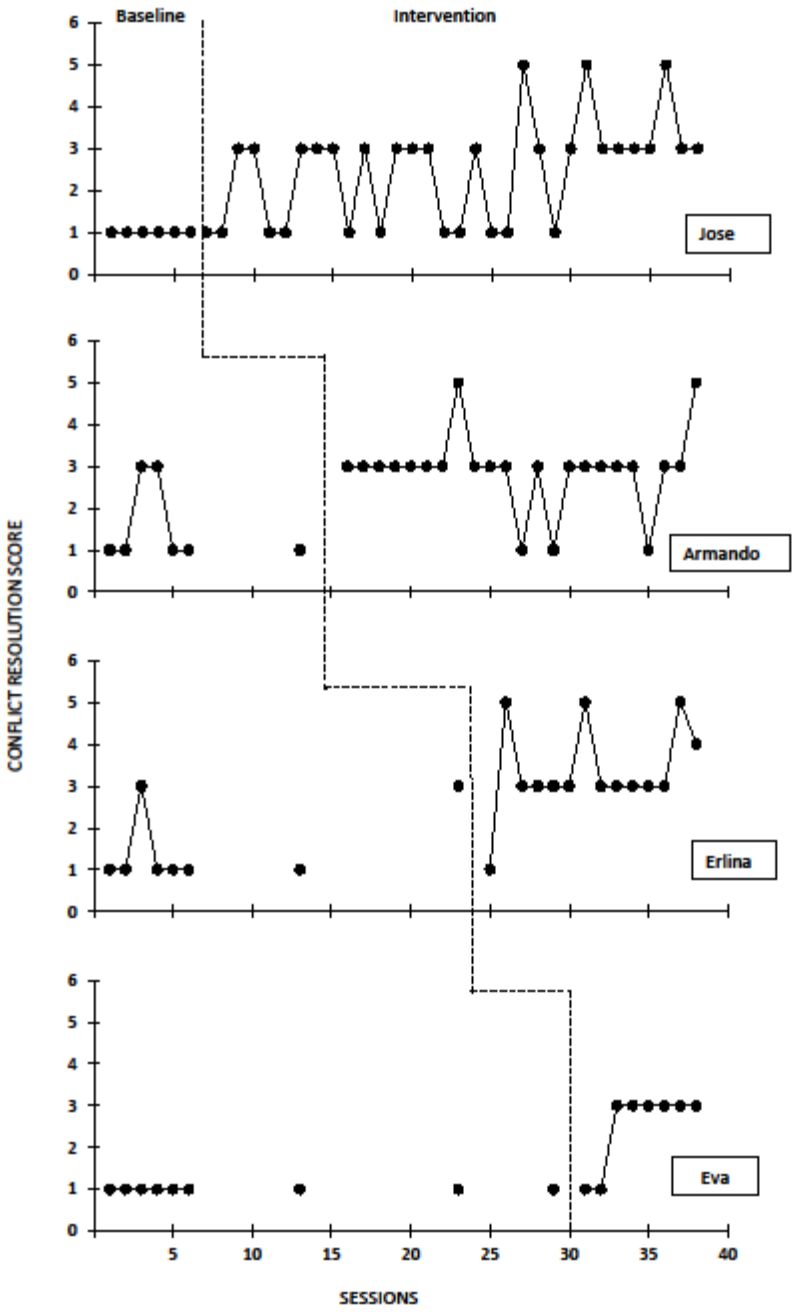

Figure 4.6. Narrative proficiency scores for the characteristic of *conflict resolution.*

Cohesion. The cohesion score reflects the speaker's ability to sequence story events and incorporate transitions (Miller et al., 2011). For the element of cohesion all participants except Eva had improved cohesion scores for more than half of the probes during intervention (See Figure 4.7). Eva showed improvement for 38% of her intervention probes. For Cohesion, baseline score averages ranged from 1-1.5 across participants and increased to a range of 1.75-3.14 during intervention.

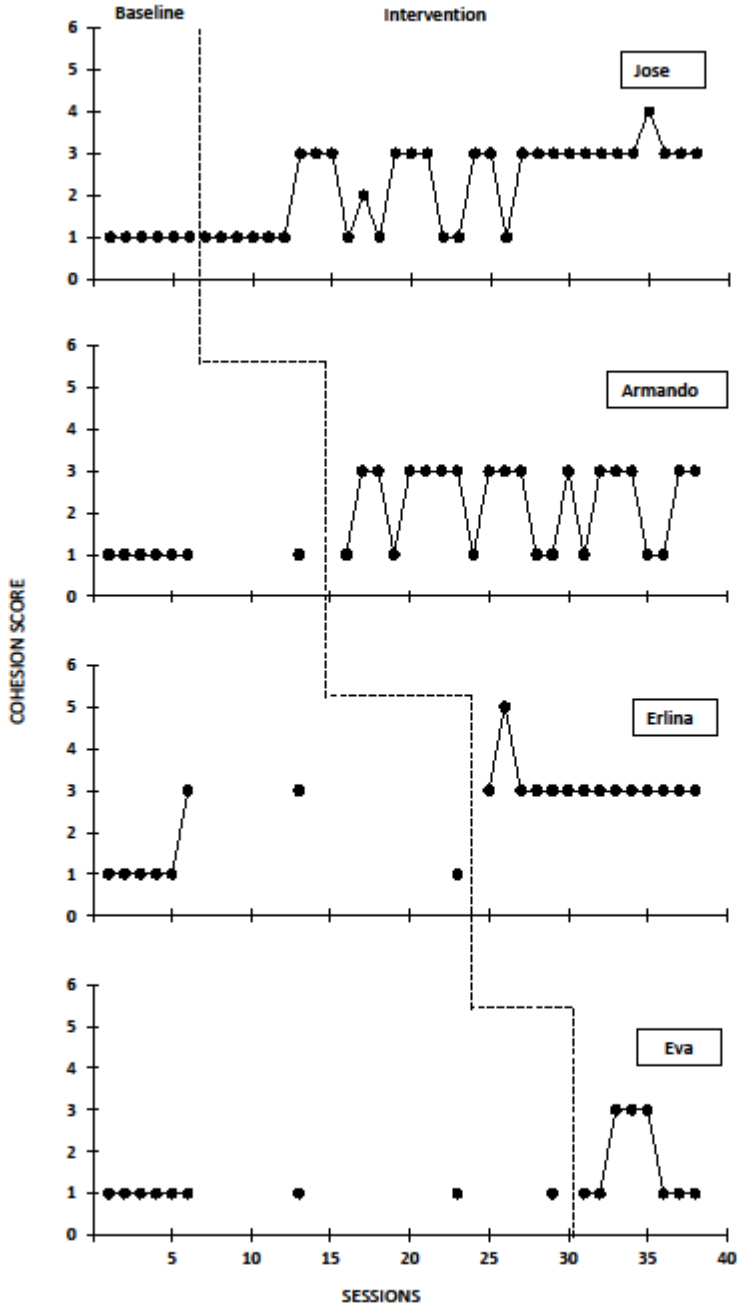

Figure 4.7. Narrative proficiency scores for the characteristic of *cohesion.*

Conclusion. Scores for conclusion are based on whether or not the speaker includes the final event in the story and wraps up the story with a concluding statement (Miller et al., 2011). A score of 3 in the conclusion category indicates that the speaker has stated the concluding event. A score of 5 indicates that the speaker has also added a general concluding statement such as "They never wanted to be apart again." Almost all of Armando's scores in this category exceeded his baseline scores, obtaining scores of 3 and 5 throughout the intervention phase (See Figure 4.8). Erlina also showed an improvement with several scores of 5 in the last half of the intervention phase. Jose too showed more consistent high scores in the last half of the intervention phase. Eva's results for conclusion were quite variable. For Conclusion, baseline score averages across participants ranged from 1-2.13 and increased to a range of 2.5-3.57 during intervention.

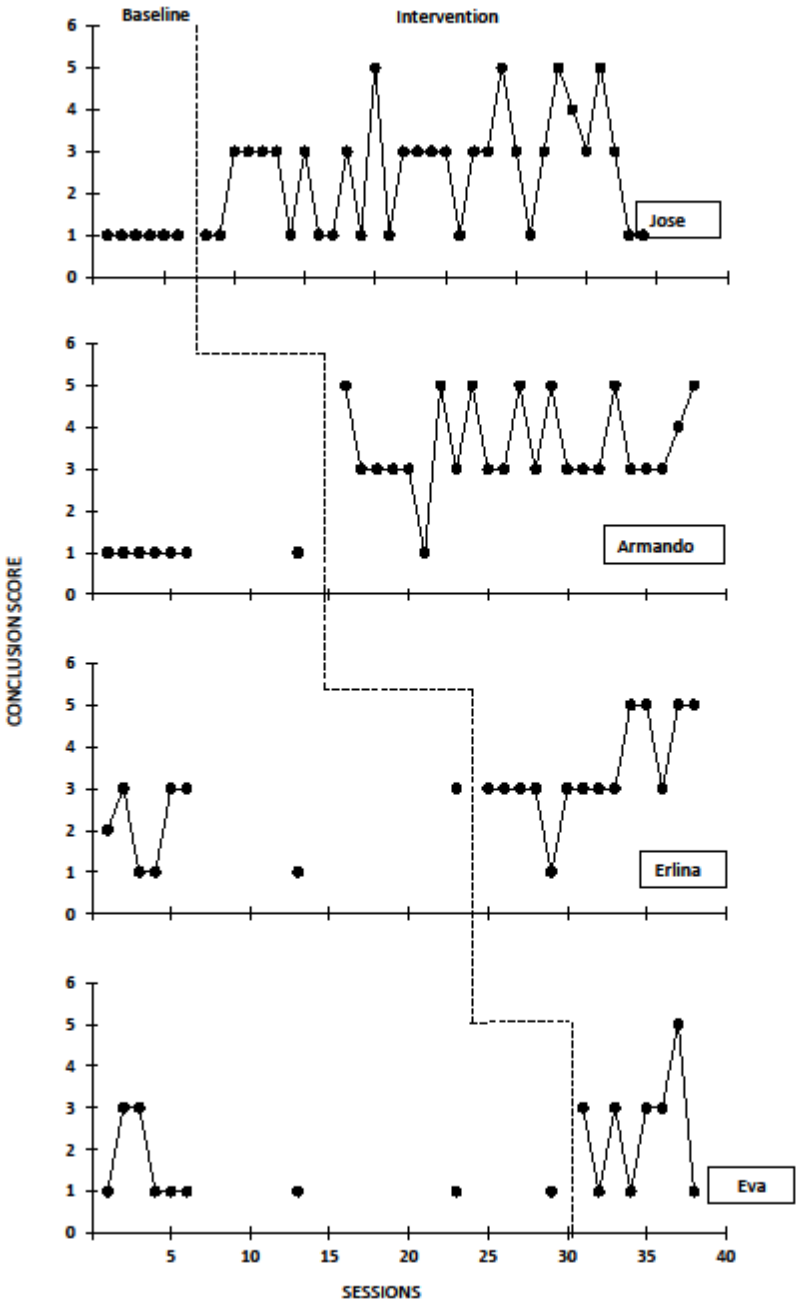

Figure 4.8. Narrative proficiency scores for the characteristic of *conclusion*.

Narrative Productivity

Graphic data on the participants' performance during baseline and intervention phases for narrative productivity are presented in Figures 4.9 and 4.10. These data are also summarized in Table 4.1 and are expressed as participants' mean and range scores across all phases.

Total Number of Words (TNW)

Level of the TNW was calculated as the mean within a condition. Visual inspection of the data indicates that three out of four participants showed an increase in level of narrative productivity as measured by TNW after implementation of the story grammar intervention (See Figure 4.9). Jose started with a mean of 185 TNW during baseline (range 122 to 312) and increased to 195 during intervention (range 98 to 287). Erlina's level increased from a baseline of 185 TNW (range 125 to 291) to 246 during intervention (range 161 to 313). Eva also showed an increase in TNW level from a baseline of 115 (range 71 to 165) to 137 during intervention (range 99 to 228). Armando's mean during baseline was 273 (range 236 to 328), but during intervention his TNW actually decreased to 257 (range 136 to 515).

Trendlines varied widely across participants. Jose had a moderate positive trend for TNW throughout intervention, however, negative trends were observed for two participants. Armando had a moderate negative trend, and while Erlina had an increase in mean TNW from baseline to intervention, she had a moderate negative trend with a higher level overall than that of baseline. Eva's data showed a flat trendline.

The PND was calculated for TNW for each participant. Erlina had the highest PND at 71%, indicating a moderate effect. The other three participants did not show an effect for TNW. Eva had 25% PND while Armando had 22%. Jose had the lowest PND for TNW at 0%.

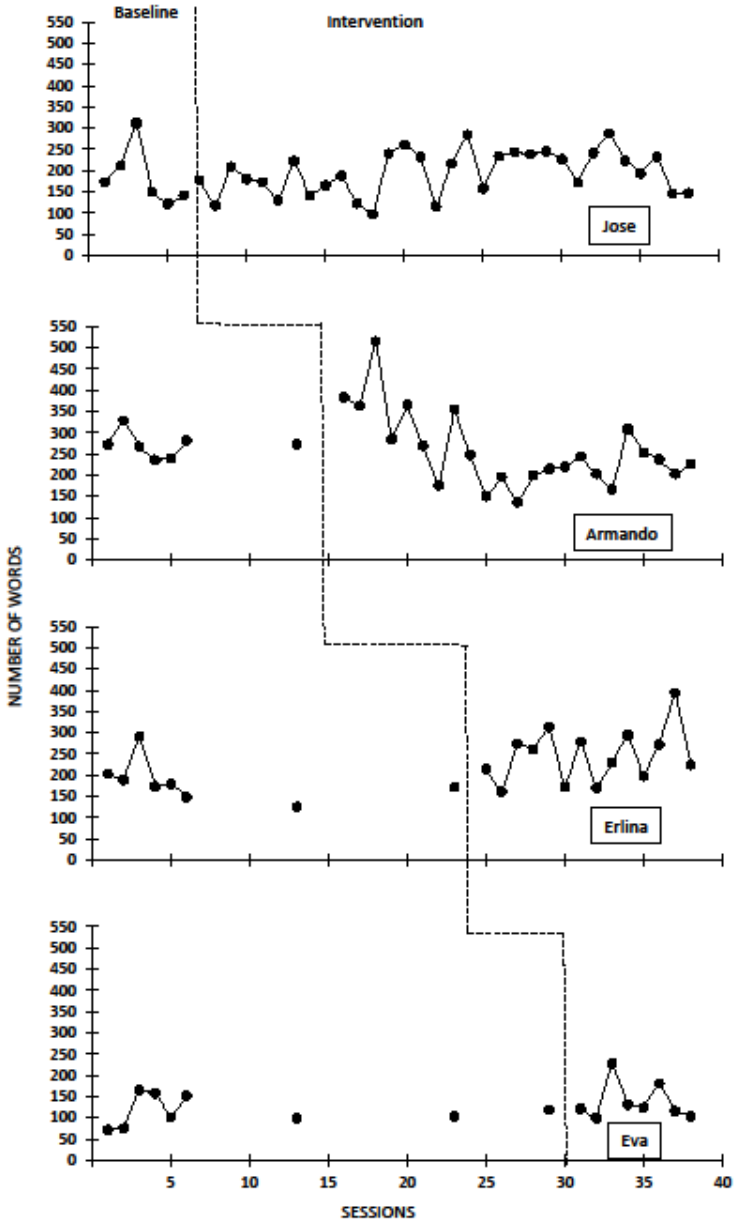

Figure 4.9. Results for Total Number of Words (TNW) produced in each story retell probe.

Number of Different Words (NDW)

For NDW two participants showed an increase after implementation of the intervention (See Figure 4.10). Erlina started with a mean of 73.5 NDW during baseline (range 53 to 109) and increased to 90.9 during intervention (range 58 to 125). Eva obtained a mean of 52 NDW during baseline (range 40 to 68) and increased to a mean of 59 during intervention (range 48 to 76). Jose had a baseline mean of 73.5 (range 52 to 102) and decreased to 71 (range 45 to 102), while Armando started with a baseline of 98.6 (range 84 to 116) and decreased to 95.5 during intervention (range 53 to 152).

Trendlines for NDW showed similar variation across participants as was reported for TNW. Jose again showed a positive trend for NDW as he did for TNW. The remaining three participants, Armando, Erlina, and Eva all showed moderate negative trends for NDW.

The PND was calculated for NDW for each participant. For NDW, all participants had low PND, indicating that the intervention did not have an effect on NDW. Eva had 25% PND. Armando had 22%. Erlina had 21.4%, and Jose had 0% PND.

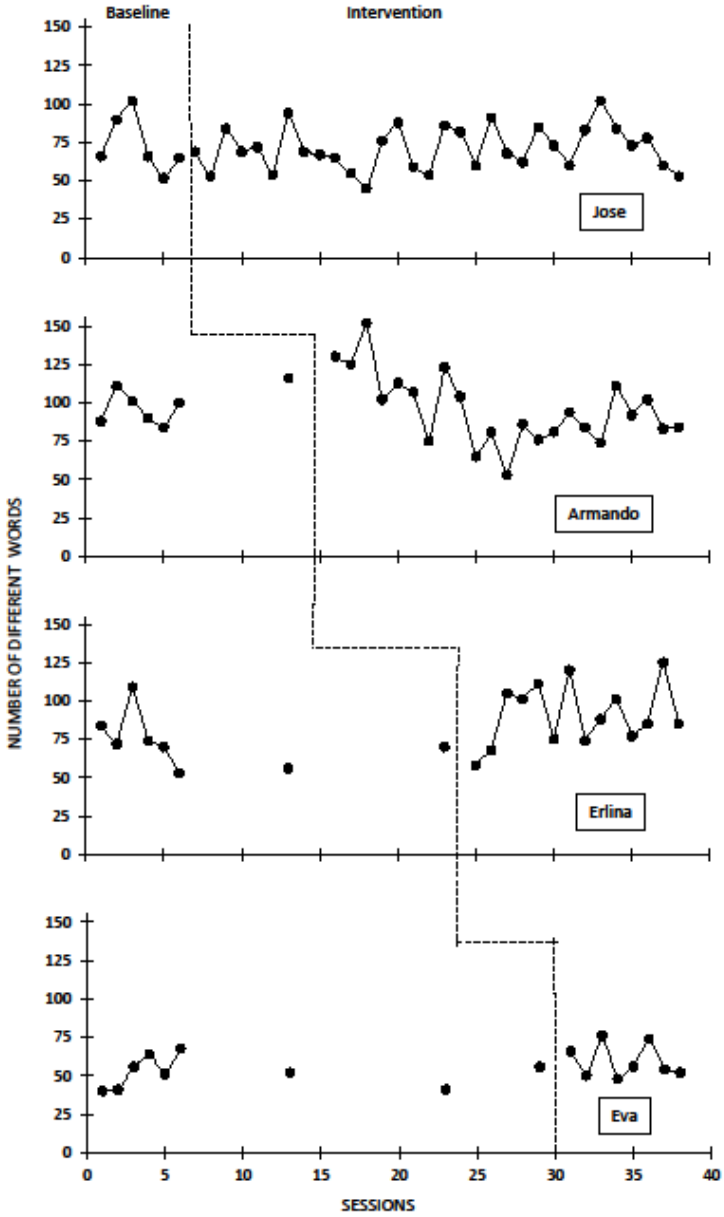

Figure 4.10. Results for Number of Different Words (NDW) produced in each story retell probe.

Syntactic Complexity

Graphic data on the participants' performance during baseline and intervention phases of the study are presented in Figure 4.11. These data are also summarized in Table 4.1 and are expressed as participants' mean and range scores across all phases.

Mean Length of Utterance in Words (MLUWs)

Syntactic complexity was measured in MLUWs, and level was calculated as a mean within phases. All four participants showed an increase in mean MLUWs from baseline to intervention. Erlina and Armando had the largest increases. Erlina had a baseline mean of 6.6 MLUWs (range 6.14 to 7.1) and increased to a mean of 7.65 in intervention phase (range 6.22 to 8.72) while Armando obtained a mean of 7.1 MLUWs in baseline (range 6.27 to 7.77) and increased to a mean of 8.1 in intervention (range 6.96 to 9.83). Jose started with a mean of 6.64 MLUWs in baseline (range 5.55 to 7.85) and then increased to 7.14 during intervention (range 5.09 to 9.92). Eva had the smallest increase. She had a mean of 5.57 during baseline (range 4.18 to 6.73) and then increased to 5.87 during intervention (range 5.23 to 6.55).

For MLUWs, data showed a negative trend for Armando, Erlina, and Eva. Jose was the only participant who had a positive trendline for MLUWs. The trend was moderate.

The PND was calculated for MLUWs. PND for one participant, Erlina, showed that the intervention was moderately effective for increasing MLUWs with a PND of 78.6%. For Armando, the effect was questionable with a PND of 61%. For the other two

participants, the intervention was not effective in increasing MLUWs. Jose had a PND of 22% while Eva's PND was 0%.

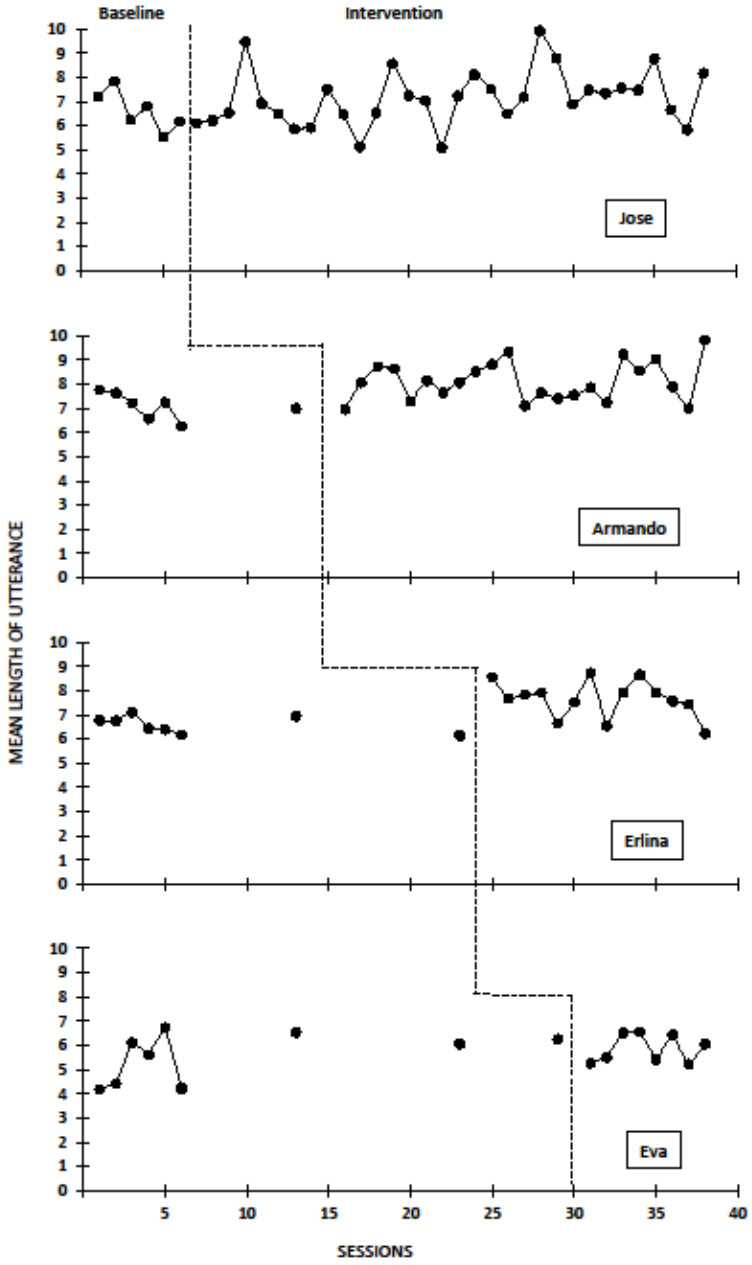

Figure 4.11. Results for Mean Length of Utterance in Words (MLUWs) produced in each story retell probe.

Pre and Posttest Results for Story Retell Language Samples

One week prior to the beginning of the study, a story retell language sample of *Frog Where Are You?* (Mayer, 1969) was elicited from all potential participants, using the elicitation protocol and story script from the SALT. The purpose of the pretest measure was to include a culturally responsive standardized pretest measure that could be compared, first of all to a posttest measure for each participant. Secondly, both the pretest and posttest measures were compared to language samples of age-matched and language-matched peers who are typically developing. While the single case design allows the researcher to monitor the progress of participants during the intervention phase and compare intervention data to the participant's baseline data, comparisons to the SALT bilingual database allow the researcher to compare each participant's outcomes to a database of typically developing, age-matched and language-matched peers in the same speaking context (Miller et al., 2011).

Pretest and posttest transcripts for each participant were compared with the bilingual English story retell database in the SALT software program. All transcripts were evaluated for narrative proficiency (measured by the NSS), narrative productivity (measured by TNW and NDW), and syntactic complexity (measured by MLUWs). The standardization cohort was based on +/- 12 months the age of each participant in order to achieve a somewhat representative sample for each.

One week after the intervention phase a story retell language sample of *Frog Where Are You?* (Mayer, 1969) was again elicited from all participants and their transcripts were compared using the same method used with the pretest sample. A paired-

samples t-test compared pretest and posttest measures. Data for Frog story measures (FSM) are summarized in Table 4.2.

Table 4.2

Comparison of Participants' pretest and posttest scores

	Dependent	Pretest		Posttest	
Participant	Variable	Score	SD	Score	SD
Jose	NSS	17	-0.85	27	1.12
	TNW	252	-0.40	271	-0.28
	NDW	77	-0.64	84	-0.48
	MLUW	6.81	-0.21	7.13	0.04
Armando	NSS	15	-1.30	23	0.25
	TNW	335	0.35	281	0.02
	NDW	110	0.44	105	0.56
	MLUW	7.28	0.17	7.81	0.68
Erlina	NSS	11	-2.10	25	0.62
	TNW	310	0.22	310	0.04
	NDW	95	0.03	95	-0.14
	MLUW	7.75	0.78	7.21	0.06
Eva	NSS	11	-2.20	25	0.63
	TNW	200	-1.15	165	-1.52
	NDW	70	-1.11	68	-1.15
	MLUW	6.67	-0.50	5.50	-1.72

Note. Standard deviations refer to a database comparison set +/- 12 months the age of each participant. SD= standard deviations, NSS= narrative scoring scheme, TNW= total number of words, NDW= number of different words, MLUW= mean length of utterance in words.

Narrative Proficiency

All four participants showed an increase from pre to post on the NSS scores for the FSM (See Tables 4.3- 4.6). Both Eva and Erlina had a composite score of 11 on the pretest language sample (both over two standard deviations below the mean) and

increased to 25 (0.63 and 0.62 standard deviations above the mean, respectively) on the post intervention language sample (See Tables 4.2 and 4.3). Jose's composite score on the NSS was 17 (0.85 below the mean) on the pretest language sample and increased to 27 (1.12 standard deviations above the mean) on the post intervention language sample (See Table 4.4). Finally, Armando received a composite score of 15 (1.3 standard deviations below the mean) on the pretest language sample and increased to 23 (0.25 standard deviations *above* the mean) on the post intervention language sample (See Table 4.5). A paired sample *t*-test (See Table 4.7) indicated a significant change in narrative proficiency (t = 7.67, d.f.= 3 , p= 0.0046) for the group mean.

Further analysis of the individual categories within the NSS reveals some notable patterns. All participants increased from pre to post in the category of *introduction* while none of the participants had increases in *character development*. Three participants, Jose, Erlina, and Eva, made increases in the category of *mental states* which includes the use of metacognitive verbs. Armando actually had a decrease in his score for *mental states* from pre to post. The category of *referencing* in which participants are expected to include clarifiers and antecedents to their pronouns, appears to have the least amount of increase across participants. Armando and Eva showed an increase while Erlina's score was unchanged, and Jose actually showed a decrease. *Conflict resolution* increased for three participants (Jose, Erlina, and Eva), but Armando's score remained unchanged. All participants improved in *cohesion* which focuses on the sequencing and transitions of a story and also in the category of *conclusion*.

Table 4.3

Eva: Comparison of NSS scores for Pre and Post Language Samples for the FSM

	Pre		Post	
NSS Category	Score	SD[a]	Score	SD[b]
Introduction	1	-2.59	5	1.92
Character Development	3	-0.35	3	-0.30
Mental States	1	-1.08	3	0.72
Referencing	3	-0.53	5	1.64
Conflict Resolution	1	-2.20	3	-0.16
Cohesion	1	-2.39	3	-0.29
Conclusion	1	-2.35	3	-0.02
NSS Composite Score	11	-2.20	25	0.63

Note. [a]Number of standard deviations away from the mean of 214 database participants. [b]Number of standard deviations away from the mean of 162 database participants.

Table 4.4

Erlina: Comparison of NSS scores for Pre and Post Language Samples for the FSM

	Pre		Post	
NSS Category	Score	SD[a]	Score	SD[b]
Introduction	1	-2.56	5	1.97
Character Development	3	-0.26	3	-0.35
Mental States	1	-1.03	3	0.72
Referencing	3	-0.46	3	-0.53
Conflict Resolution	1	-2.13	5	1.81
Cohesion	1	-2.30	3	-0.33
Conclusion	1	-2.19	3	-0.04
NSS Composite Score	11	-2.10	25	0.62

Note. [a]Number of standard deviations away from the mean of 313 database participants. [b]Number of standard deviations away from the mean of 198 database participants.

Table 4.5

Jose: Comparison of NSS scores for Pre and Post Language Samples for the FSM

	Pre		Post	
NSS Category	Score	SD[a]	Score	SD[b]
Introduction	3	-0.18	5	2.01
Character Development	3	-0.24	3	-0.30
Mental States	1	-1.03	3	0.78
Referencing	5	1.76	3	-0.53
Conflict Resolution	1	-2.11	5	1.88
Cohesion	1	-2.26	3	-0.29
Conclusion	3	0.04	5	2.30
NSS Composite Score	17	-0.85	27	1.12

Note. [a]Number of standard deviations away from the mean of 345 database participants.
[b]Number of standard deviations away from the mean of 253 database participants.

Table 4.6

Armando: Comparison of NSS scores for Pre and Post Language Samples for the FSM

	Pre		Post	
NSS Category	Score	SD[a]	Score	SD[b]
Introduction	1**	-2.62	5*	1.96
Character Development	3	-0.32	3	-0.27
Mental States	3	0.71	1	-0.92
Referencing	1**	-2.54	3	-0.66
Conflict Resolution	3	-0.18	3	-0.11
Cohesion	1**	-2.25	3	-0.21
Conclusion	3	-0.04	5**	2.23
NSS Composite Score	15*	-1.30	23	0.25

Note. [a]Number of standard deviations away from the mean of 132 database participants.
[b]Number of standard deviations away from the mean of 53 database participants.

Narrative Productivity

Total Number of Words (TNW). Changes in TNW were variable across subjects (See Table 4.2). While two participants, Armando and Eva, showed some decrease from pre to post on the FSM, one participant, Jose, showed an increase from pre to post, and the fourth participant, Erlina, produced the exact same number of TNW and NDW in both pre and post measures. Although Armando showed a slight decrease in TNW from pre to post, he was still within normal limits (+/- 1SD; Miller et al., 2011) for both pre and post language samples. Armando had 335 TNW (0.35 above the mean) for his pretest sample, and it decreased slightly to 281 (0.02 above the mean) in his posttest sample, also keeping within normal limits. Eva showed a general decline in narrative productivity. She started with 200 TNW (-1.15 SD below the mean) on the pretest sample which was below normal limits. In her posttest sample, Eva decreased to 165 TNW (-1.52 SD below the mean), also below the normal limits. Jose had 252 TNW (-0.40 SD below the mean) on his pretest language sample. On the posttest sample, Jose's TNW increased to 271 (-0.28 SD below the mean). Jose's TNW measures show outcomes within normal limits on both pre and post measures. Further, Erlina's narrative productivity outcomes fluctuated very little. She began with 310 TNW (0.22 SD above the mean) and ended with 310 TNW (0.04 SD above the mean). A paired sample *t*-test (See Table 4.7), comparing TNW measures revealed that the intervention did not affect a significant change for TNW ($t = 1.06$, d.f.= 3, $p = 0.3673$) group means.

Number of Different Words (NDW). Changes in NDW for FSM also exhibited considerable variability across subjects (See Table 4.2) . Armando's NDW in the pretest sample was 110 (0.44 SD above the mean), and it decreased slightly to 105 (0.56 above the mean), both within normal limits. Eva had 70 NDW (-1.11 SD below the mean) in her pretest sample and 68 NDW (-1.15 SD below the mean) for the posttest. Jose used 77 NDW (-0.64 SD below the mean) in his pretest sample, and his NDW increased to 84 (-0.48 below the mean). For NDW, Erlina again remained steady with 95 NDW (0.03 SD above the mean) in her pretest sample and 95 (-0.14 SD below the mean) in her posttest sample. Results from a paired sample *t*-test (See Table 4.7) indicated no significant intervention effect on NDW ($t = 0$, d.f. = 3, $p = 1.0$) for the group mean.

Syntactic Complexity

Two participants had increases in MLUWs from pre to post on the FSM while the other two participants showed a decrease (See Table 4.2). Jose started with 6.81 MLUWs (-0.21 SD below the mean) in his pretest sample and increased to 7.13 MLUWs (0.04 SD *above* the mean) in his posttest sample. Armando had 7.28 MLUWs (0.17 above the mean) in his pretest sample, and he increased to 7.81 (0.68 SD above the mean) in his posttest sample. Erlina showed a slight decrease in MLUWs between pre and posttest samples, however both samples had MLUWs within the normal range. MLUWs in the pretest were 7.75 (0.78 SD above the mean), and in the posttest sample Erlina had 7.21 MLUWs (0.06 SD above the mean). Eva showed a decline in syntactic complexity from pre to post. In her pretest sample, Eva had 6.67 MLUWs (-0.50 SD below the mean), and then in her posttest sample she scored 5.50 MLUWs (-1.72 SD below the mean). Results

from a paired sample *t*-test (See Table 4.7) indicated no significant intervention effects in MLUWs (t = 0.55, d.f. = 3, p = 0.6229).

Table 4.7 Results of Paired-sample t-test on pre and posttest group mean scores

	Pretest		Posttest							
Variable	Mean	SD	Mean	SD	Diff	n	LL	UL	*t*	*P-value*
NSS	13.5	3	25	1.63	11.5	4	6.7	16.2	7.67	0.0046
TNW	274.25	60.49	256.75	63.6	17.5	4	-35.0	70.1	1.06	0.3673
NDW	88	18.06	88	15.85	0	4	-8.1	8.1	0	1.00
MLUW	7.13	0.49	6.91	0.99	0.215	4	-1.0	1.47	0.55	0.6229

Note. NSS = narrative scoring scheme; TNW = total number of different words; NDW = number of different words; MLUW = mean length of utterance in words; SD = standard deviations; Diff = mean difference; LL = lower limit; UL = upper limit.

Social Validity

Student participants

Regarding social validity, student participants responded to a questionnaire (See Appendix E). All participants indicated that they enjoyed listening to stories and working with the interventionist. Jose and Armando indicated that they did know the parts of a story while the other two participants were not sure that they knew them. Three out of four participants, Jose, Armando, and Erlina, reported that the use of the story braid helped them to tell stories better while Eva reported that it did not help. When asked whether or not they tried to use what they learned about the story braid in their regular classroom, Erlina and Jose were not sure, while Armando gave an affirmative response and Eva answered negatively.

Students also had an opportunity to indicate what they liked best and what they did not like about the intervention. All students indicated that they liked either listening to a story or telling the story with the teacher. What the students did not like included: going to another room, getting stuck on a word, long books, and one student (Eva) did not like having to tell the story.

Teacher participants

A group of seven teachers who worked with the student participants were asked to evaluate the social validity of the intervention through a questionnaire (See Appendix E) that they completed after viewing a video of one intervention session with one of the participants. The first six items were rated on a 5-point Likert-type scale from 1 (strongly disagree) to 5 (strongly agree). The questionnaire also included two open-ended questions. Mean Likert scale scores were calculated for teacher social validity measures. For both of the statements, "Narrative skills are important in everyday life" and "Narrative abilities are connected to a student's reading and writing abilities" the mean score was 4.9. A mean score of 4.7 was recorded in response to the intervention activities being appropriate for third and fourth graders. For the statement, "The students seemed to enjoy the activities" the mean score was 4. In response to the statement, "the activities you saw in the video lesson could be adapted for use with larger groups of students" the mean score was 4.4. For the statement, "It is likely that this intervention will make permanent improvements in a student's narrative abilities" the mean score was 4.6.

The teachers also had the opportunity to tell what kind of students they thought might benefit from such an intervention. Reponses included: ELLs, students with

comprehension difficulties, students with SLI, students with limited vocabulary, and students who have difficulty with oral expression. When asked whether they would be willing to implement this type of intervention into their own classroom, all teachers responded "yes". One teacher commented that the intervention gives the students a structure that allows them to "crack the code" of fiction texts. Another teacher expressed her idea that there was a "dual benefit for oral expression practice and practice with story structure." Another teacher indicated that it may help students who have problems remembering what they read in a story.

Summary

Findings from this study indicate that all four participants' narrative proficiency increased during the story grammar intervention. All participants increased their mean overall narrative proficiency (NSS) scores by approximately seven points from baseline to intervention. Pre and posttest language sample comparisons also showed an increase in narrative proficiency. Further comparisons of pre and posttest samples to the SALT normative sample indicated that for the three participants who began with scores 0.85, one and two SD below the mean at pretest, narrative proficiency outcomes were within or above normal limits (+/-SD; Miller et al., 2011) at the time of posttest.

Results for narrative productivity during intervention varied across subjects. For TNW, three participants made gains, but Armando's TNW showed a steady moderate decrease throughout the intervention phase, resulting in an intervention mean lower than that during baseline. However, in the pretest-postest language sample comparison, Jose

was the only one to show an increase. Erlina's scores were the same for pre and post, while Armando and Eva showed a decrease in TNW.

For NDW during intervention, Erlina and Eva had increases from baseline to intervention while Armando and Jose had decreases. Comparison of NDW data from language samples pretest to posttest indicated an increase in NDW for only Jose. Erlina scored exactly the same from pre to post, and Armando and Eva had decreases in NDW.

Results in the area of syntactic complexity during intervention showed increases for all four participants. Pre to post comparisons showed small increases for three participants with MLUWs remaining within normal limits for pre and post measures. For Eva, however, pretest MLUWs started within normal limits, but they decreased to a level more than one SD below the mean at posttest.

Social validity data revealed that all student participants enjoyed the intervention with three out of four indicating that the intervention helped them to tell stories better. Teacher participants indicated that the intervention was considered to be an acceptable intervention to improve the narrative skills of the participants that would have long term effects. Chapter five presents an in-depth discussion of all of these results.

CHAPTER FIVE

DISCUSSION

The purpose of this study was to examine the effects of a story grammar intervention that used a Story Grammar Marker® and repeated story retells on the oral narrative skills of third and fourth grade ELLs with SLI. Data were collected from the transcripts of story retells and analyzed on a total of 30 baseline probes and 77 intervention probes across four participants and three dependent variables: narrative proficiency as measured by the NSS, narrative productivity as measured by TNW and NDW, and narrative complexity as measured by MLUWs.

The intervention implemented in the present study applied the concepts of Cognitive Load Theory (Sweller, 1994) and Baddeley's Working Memory Model (2000). It was hypothesized that the Story Grammar Marker® (SGM) which was used to explicitly teach the structure of storytelling, would become incorporated into the long term memory of the participants and act as a storytelling schema. It was thought that remembering a "picture" of the SGM instead of a list of story grammar elements would reduce the cognitive load of the story retell process. Additionally, the use of repeated retells which incorporated the story grammar elements was hypothesized to increase automaticity or fluency of telling stories which would circumvent the limited working memory capacities found in children with SLI and in ELLs who are telling stories in their second language.

While outcomes regarding the primary dependent variable, narrative proficiency as measured by the NSS, were consistent across participants, outcomes for narrative

productivity (TNW and NDW) and narrative complexity (MLUs) varied across participants. In this chapter, we will discuss (a) the effect of the story grammar intervention on narrative proficiency, narrative productivity, and narrative complexity, (b) the limitations of the study, (c) the implications for future research, and (d) the implications for practice.

Narrative Proficiency

Although results varied for individual participants, overall, the findings of this study demonstrated that the use of the Story Grammar Marker® paired with repeated story retells had a positive effect on the narrative skills of third and fourth grade ELLs with specific language impairments. In this study, the Narrative Scoring Scheme (NSS; Miller & Heilmann, 2004) a criterion-referenced narrative scoring system was used to calculate an index of the participant's ability to produce a coherent oral narrative through the analysis of transcribed oral narrative language samples. The NSS measures the categories of the story grammar elements as well as narrative language features of cohesion, connecting events, metacognitive/metalinguistic language, and referencing as these are language features used by proficient narrators (Heilmann, Miller, & Nockerts, 2010). In this study, NSS scores increased from baseline to intervention for all participants. Further, a standardized measure of narrative proficiency was administered pre and posttest, eliciting a retell of *Frog Where Are You?* (Mayer, 1969). A comparison of pretest and posttest measures of NSS scores for the Frog Story Measure (FSM) also showed an increase for all participants in narrative proficiency, and a paired *t*-test indicated that the increase for narrative proficiency was statistically significant.

These findings are consistent with previous research on narrative interventions that demonstrated improvements in story structure (e.g. Cruz de Quiros, et al., 2012; Davies et al., 2004; Green & Klecan-Acker, 2012). More specifically, the findings in the current study reflect those of Spencer and Slocum (2010) which indicated that the use of explicit teaching of story grammar elements increased the use of those elements in story retells in young children's narratives. Spencer and Slocum's study included 5 typically developing preschoolers, ages 4 to 6 years, including two Spanish-speakers from a Head Start program. Both the current study and that of Spencer and Slocum used modeled storytelling, co-retelling, and independent retelling. Spencer and Slocum used story grammar icons that they placed on pictures of the story instead of the Story Grammar Marker®.

Findings from the current study also support the findings of Hayward and Schneider (2000), a study that also used explicit teaching of story grammar elements paired with story retells to improve the narrative abilities of 13 monolingual English speakers (ages 4 to 6 years) with SLI and comorbid disabilities (e.g. ADHD, Cerebral Palsy, Autism). The intervention was conducted in small groups. Clinicians in the study used cue cards to identify story grammar elements and used their pretest stories as stimuli. Activities used in the intervention included identification of story grammar elements, identification of missing story grammar components, sorting and sequencing story grammar components, and reconstructing scrambled stories. In addition, intervention activities were also incorporated into the regular classroom instruction as center activities. Results for this study revealed that twelve out of thirteen participants

improved in the inclusion of relevant story events which included the use of story grammar elements. No differences were noted between groups with comorbid disabilities.

In chapter four each characteristic of the NSS measure was analyzed for all participants in the current study. The most significant improvements for narrative proficiency across participants appear to be in the categories of referencing, conflict resolution, cohesion, and conclusion even though the use of cohesive devices such as pronouns and their references and literate language such as mental state words were not explicitly taught during the intervention sessions (as they are not story grammar elements). It is difficult to say for certain, but perhaps the modeling of storytelling and the repetition of retellings helped to support the way that the story grammar elements are connected. Learning a new skill through schema acquisition is a gradual process (Sweller, 1994). In the beginning, as a new skill in learned, the information is "consciously attended to" (Sweller, 1994, p. 296), but after a skill has been well-learned, a conscious effort is no longer necessary, and therefore the task has become automatic. Learning the story grammar elements simultaneously as part of a schema (the SGM) is important because the interactivity of the story grammar elements creates a high intrinsic cognitive load (Sweller, 1994) while the instructional design of explicit instruction lowers the extrinsic cognitive load. According to Cognitive Load Theory, schemas are stored in the long term memory and they hold multiple interacting elements (Paas, Renkl, & Sweller, 2003). These schemas can be brought into the working memory where they can be manipulated. While the SGM reminded children of the characters' attempts in the story to accomplish their goals, perhaps the children developed increasing automaticity in the

interactivity of the story grammar elements and were able to link the essential story elements together enough to create a more cohesive story and more salient story conclusions.

Especially notable were the results from the FSM when compared to the bilingual database sample. The bilingual English story retell database used in the SALT software consists of narrative language samples from typically developing Spanish/English ELLs from urban public schools in Texas and California, ages 5;0 to 9;9 (Miller et al., 2012). The database samples came from various levels of socio-economic status and from parents with varying levels of education. The profile for the database participants reflects that of the sample in this study with the exception of the participants in this study being from a rural setting.

The effect of this story grammar intervention is also supported by the pre and posttest comparisons to the database sample. While the three bilingual participants in the current study started more than one and two standard deviations below the mean, in comparison to typically developing, age-matched Spanish/English bilinguals who were ELLs, their scores improved at posttest to within the normal limits. These results demonstrate that the narrative proficiency skills of ELLs with SLI can improve to the level of typically developing children over a period of twelve weeks or less.

Narrative Productivity

Narrative productivity, or the amount of language produced by a speaker, is an indicator of language knowledge (Bedore et al., 2010), and ELLs with language impairments generally demonstrate weaknesses in narrative productivity variables such

as TNW and in lexical diversity measures such as NDW (e.g. McCabe & Bliss, 2004; Iluz-Cohen & Walters, 2011). Explanations related to the narrative productivity results in the current study are discussed in the next section.

This is the first study that tests the effects of a story grammar intervention on the narrative skills of ELLs with SLI. There are several important considerations that must be taken into account when looking at narrative productivity in the current study. Participants in this study were sequential bilinguals. Sequential bilinguals are children who have learned their home language (L1) first before they begin to learn their second language (L2; Paradis, 2010). The participants in this study began to learn English as they entered school. The amount of exposure and the setting for learning each language (e.g. home, school) influences the patterns of acquisition of each language (Bedore & Peña, 2008), which influences the number of words they know in each language (Marchman, Martínez-Sussman, & Dale, 2004). Indeed, the amount of words that bilingual children know is about the same as that for monolingual children, however, they are distributed across two languages with some overlap (Pearson & Fernandez, 1994). Uneven performances across tasks, settings, and languages may emerge in children who are sequential bilinguals because of their use of different languages with different kinds of conversation partners (e.g., family members, teachers, friends) and in different settings (e.g., the classroom, the home, the playground), and for different purposes (e.g., summarizing social studies text, telling a story at home about their school day, negotiating bedtimes; Kohnert, 2010). Therefore, children will learn different types of words in different contexts. Because the language input for sequential bilinguals is less

for each language they speak, in that it is spread over two different languages (Bedore & Peña, 2008), and given the different contexts and contents of the stories that were used in the study, and given the fact that samples were only elicited in English, the inconsistent results in TNW and NDW may be partially explained by this distribution of language input.

Another important consideration that has an effect on narrative productivity is the length of the language samples. According to the SALT manual, the most robust language samples are those that are between 35 and 65 utterances (Miller et al., 2011). The length of the language sample can have an effect on the reliability of microstructural measures. Seventy percent of Jose's language samples contained less than 35 utterances. For Armando, the percentage was 40%, and for Erlina and Eva, 55% and 59%, respectively. Since all participants had samples with less than 35 utterances across phases, the length of language samples may have affected the overall sensitivity of the TNW and NDW measures. See Appendix F for a sample transcript and standard measures report from the SALT.

Another explanation for the lack of increase in narrative productivity may be due to the fact the intervention was focused on the narrative proficiency. All instruction emphasized the story grammar elements. While microstructural measures (i.e. TNW, NDW, and MLUWs) have been reported to be correlated to the macrostructure (i.e. story grammar elements; Heilmann, Miller, Nockerts, and Dunaway, 2010), the reported correlation was discovered among a sample of typically developing children with some bilingual children who were English proficient.

Total Number of Words (TNW). Results of this study for measures of narrative productivity did not show an overall increase for participants in TNW from baseline to intervention. Although mean levels of TNW increased from baseline to intervention for three of the four participants (Jose, Erlina and Eva), PNDs were low except in the case of Erlina (71%). Indeed, pre and posttest results from the Frog Story Measure (FSM) for TNW were also mixed. FSM comparisons showed an increase for Jose, a decrease for Armando and Eva, and no change for Erlina.

One explanation for this mixed finding could be related to the nature of the children's language impairments. Erlina's language impairment was documented as difficulties in expressive language only. The other three participants had delays in both expressive and receptive language. It may be that Erlina was better able to comprehend the story as she heard it and, in turn, could remember more details when she retold the story. This explanation is consistent with the findings of Boudreau (2007 as cited in Boudreau, 2008) who compared the narrative performance of children with combined receptive and expressive language impairment with that of children who had impairment only in expressive language. Boudreau found that children with both receptive and expressive impairments performed significantly lower than children with expressive impairments only across TNW, NDW, and MLUs.

Number of Different Words (NDW). As with TNW measures, the results for NDW were mixed. The means for NDW increased from baseline to intervention for two participants, Erlina and Eva, however, the PND was no more than 25% for either one. The other two participants Jose and Armando, showed a decrease in NDW measures. The

comparison of pre and post NDW measures on the FSM reflected the same results as for TNW. There are two possible explanations for the lack of increase in this variable.

The first explanation involves participants' use of overextension of high-frequency labels. Children, regardless of the language they are learning, make naming errors in their discourse that are based on a lack of experience or development or a lack of exposure to low-frequency words, and when this occurs, children may overextend the use of a high-frequency word (Bedore & Peña, 2008). Findings in the current study demonstrate this trend. One example of this overextension can be seen in Jose's transcripts. It appeared that any time a story event referred to writing a message, Jose used the phrase "write a note". In the story about the flying cow, the main character painted a sign advertising an opening for a new cow to work on the farm. Jose said that the lady "wrote a note". In *Piggie Pie* (Palatini, 1997) when the witch wrote a message in the sky with smoke from her broom, Jose said that the witch "wrote a note". Again, in *Mole Music* (McPhail, 1999), when the mole ordered a violin through the mail, Jose said that the mole "wrote a note". Another example of overuse of words can be seen in Armando's use of the word, "something". In the story, *Martina the Beautiful Cockroach,* Armando used "something" several times. He said, "Then his father told the parrot to go fly and something." Later in his retell, he said, "And then he saw that he was all nasty, that he was rotten eggs with him something."

Overextension of high-frequency words was also prevalent in the transitions between utterances for all participants. The words "and", "and then", and "so" are the first words of most utterances in the story retells throughout the intervention language

samples. While this type of overextension is not a type of naming error, it does have an effect on how many *different* words the child is using in his language samples.

The following excerpts from participants' transcripts provide examples of overextension of high-frequency words.

Armando: from *Martina the Beautiful Cockroach* (Deedy, 2007)

"*Then* all these animals came to visit Catalina, and *then* Catalina was crossing a leg and crossing and crossing. *Then* this little mouse saw her. *Then* the rooster came, and the rooster thought if he can be his wife. But no, Catalina brought some coffee on him. *Then* the rooster got angry because he got coffee on his shoes. *Then* el cerdo came."

Jose: from *Piggie Pie* (Palatini, 1995)

"*Then* the witch waked up and yelled that she was hungry. *And* when she yelled for the food, *then* she eat. She was think about piggy pie. *And* she look at the book of food, *and* it was old. *And* she pulled her hair and stomped her feet. *And* her belly growl. *And* she was very hungry. *Then* she was thinking about the circus."

A second explanation for this finding could be related to the intervention. The focus of the intervention strategy was on the identification and use of the story grammar elements which targeted narrative proficiency. Previous findings in the literature indicated that TNW and NDW did increase in a similarly implemented intervention. Petersen et al. (2010) conducted a study with three children, ages 6 to 8 years, who had neuromuscular impairments and comorbid expressive and receptive language impairments. In that study, two of the three monolingual participants showed increases in NDW and in TNW. While the intervention that Petersen and colleagues used included

the same modelling, co-tell, retell design as did the current study, their intervention focused as much on specific microstructural elements (e.g. pronomial references, temporal adverbs, and causality markers) as it did on macrostructural elements (e.g. story grammar). In addition, story tellings and retellings occurred five different times within a 60 minute intervention session which was a procedural difference between that study and the current study. It appears that the number of repetitions of retells and the duration of the intervention sessions, along with the specific prompting of microstructural measures, may have made a difference in the increases of NDW for the participants in the Petersen et al. study.

Syntactic Complexity

Results for syntactic complexity which was measured by MLUWs, showed an increase for all four participants although the effects based on their PND scores varied. The PND for MLUWs for Erlina showed a positive effect at 78.6% and a questionable effect for Armando at 61%. The PND for Jose and Eva were 22% and 0% respectively. Pre and posttest comparisons of the FSM showed an increase for Jose and Armando, but a decrease for Erlina and Eva.

One explanation for the lack of effect on MLUWs is that children with SLI can have a high percentage of articulation errors and mispronunications that yield low intelligibility for the transcription for MLU estimates (Rice et al., 2010). All participants in the current study had some unintelligible utterances in their language samples. An unintelligible utterance is any utterance that contains unintelligible words. None of the words in unintelligible utterance are counted. Armando had an average of 2%

unintelligible utterances across all phases. Erlina had 2.2%, and Jose and Eva had the highest percentages with 4.9% and 8.3% respectively. Though some of the unintelligibility was due to the participant speaking in a low volume, much of it was due to mispronunciations and poor articulation.

The following excerpts from participants' transcripts provide examples of articulation errors resulting in unintelligible utterances. (Note: XX represents an unintelligible word).

Eva: from *The Chicken Chasing Queen of Lamar County* (Harrington, J.N., 2007)

"She caught the XX. She's grabbing the XX, and she's staring at the chicken. Then she's thinking of the food, and the chicken stare at her. She jumps and trying to catch her. She have a XX. XX run away, and she drinks water. She keeps XX."

Jose: from *If the Shoe Fits* (Soto, 2002)

" And Rigo wants to play with water balloons. And then he throwed his shoes in the closet. And he went to the party XX. And he XX it. And he XX his shoes, and they were too tight. And he walked backwards. And then he didn't want to. The kids at the party XX XX XX. And they go outside with no shoes. And they eat food, food XX."

Another important point to make about the MLUWs is concerned with the length of the language samples. As was discussed in the section on narrative productivity, language samples between 35 and 65 utterances produce the most reliable microstructural measures (Miller et al., 2011), and all participants in the current study had some language samples that contained less than 35 utterances. The length of language samples in the current study may have affected the overall sensitivity of the MLUW measure.

Social Validity

Social validity is a measure of the satisfaction participants experience in relation to an intervention, or a measure of the belief of appropriateness or effectiveness of an intervention (Kennedy, 2005). All participants reported that they enjoyed listening to stories and working with the interventionist. Social validity results for teachers showed that teachers found narrative skills to be important. All the teachers and the SLP rated the intervention in this study as enjoyable for students and appropriate for third and fourth graders, and they agreed that the intervention might be able to make permanent changes in the narrative skills of the participants. All teachers also agreed that the intervention could be adapted for use with more than one student at a time. There were no notable differences in the responses between the special education teacher, the speech language pathologist, the ESOL teachers or the general education teachers.

Limitations

Although the results of this study contribute to the literature regarding the effectiveness of narrative interventions with Spanish/English bilingual students with specific language impairments, there are several limitations that should be noted. First, the length of the language samples was a limitation in this study. While short language samples are appropriate for use as a progress monitoring tool for story retells (Heilmann, Nockerts, & Miller, 2010), samples between 35 and 65 utterances in length are the most stable and robust (Miller et al., 2011). The number of utterances is one of the measures counted by the SALT program. For three out of four participants, over 50% of their language samples were under 35 utterances. This may have had an effect on the

sensitivity of the microstructural measures of narrative productivity and complexity (i.e. TNW, NDW, MLUWs).

A second limitation of this study is that no listening comprehension assessment task was used. Past research reveals that children with SLI, whether monolingual or bilingual, have comprehension difficulties (Bedore & Peña, 2008; Merritt & Liles, 1987). For participants who had difficulties retelling stories, even during intervention, it is not clear whether the difficulties stemmed from comprehension difficulties as they listened to the story, expressive language difficulties, or a combination of both. Three of the four participants had been identified as students with both expressive and receptive language impairments. Erlina, who had been identified as only having expressive language impairment, had more positive outcomes for narrative proficiency, narrative productivity and syntactic complexity measures than the other participants.

A third limitation of the study was the amount and type of instructional services that each participant was receiving outside of the general education classroom. While all participants received the same amount of speech services (i.e., one hour per week), two of the participants, Erlina and Armando, who had comorbid learning disabilities in reading were receiving 45 minutes per day of additional instruction in reading through special education services. This extra time in a classroom where instruction was intense and focused on reading skills may have had an effect on the amount or the rate of improvement in narrative skills for these participants, giving them a slight advantage over Jose and Eva.

In addition, ESOL services for the four participants were different. Eva and Jose were receiving pull-out ESOL instruction for 45 minute periods. Eva received one-on-one ESOL instruction four days per week, and Jose received small group ESOL instruction three days per week. ESOL instruction focused on vocabulary instruction as well as reading and writing instruction. Neither Erlina nor Armando received direct ESOL services. The ESOL teachers and general education teachers consulted weekly to collaborate on instructional strategies for classroom instruction. Although the amount of direct ESOL service was not equal across participants, it did not appear that ESOL instruction gave any particular advantages to Jose or to Eva.

External validity refers to the extent that an experiment's results can be generalized to similar populations outside the experimental setting (Kennedy, 2005). The external validity of the results of this research study is limited due to the difference in instructional services.

Implications for Future Research

More research needs to be done in the area of instructional intervention for ELLs, especially for ELLs with disabilities (Gersten & Baker, 2000) in the areas of language and literacy development (McCardle, McCarthy, & Leos, 2005). While the results of this study demonstrate that a story grammar intervention that incorporates repeated retells can improve the narrative proficiency of Spanish/English ELLs with SLI who are in third and fourth grade, findings from the current study suggest several areas for future research.

First, systematic replications of this research should be conducted with younger children (i.e. primary grades) and larger group studies. Previous research has stressed a

strong link between the oral narrative skills of preschoolers and emergent literacy development (Dickinson & McCabe, 1991; McCabe & Rollins, 1994). Narrative skills have been found to be a predictor of progress in language development (Cleave et al., 2010) and a predictor of later reading outcomes (Dickinson & McCabe, 2001; Gutiérrez-Clellen, 2002). For teachers and SLPs who work with ELLs, then, it is important to have detailed knowledge about children's narrative and language skills (Riley & Burrell, 2007). Therefore, future research needs to investigate the efficacy of this type of intervention with children in the primary grades so that children might develop the reading prereadiness skills that they need and so that teachers can better understand the language development of their ELL students.

Second, future studies should include a comprehension measure. For participants in this study who had particular difficulties retelling stories (e.g. long pauses, omission of story events) it was unclear whether the difficulties stemmed from a receptive or an expressive language problem. Future researchers should include a listening comprehension measure perhaps as an inclusion criterion to ensure that participants have an appropriate level of listening comprehension to understand the stories they will be listening to. Alternatively, including a comprehension measure as a progress monitoring tool or as a pre and post measure could be used to test whether the intervention also improves receptive narrative skills. Cruz de Quiros et al. (2012) incorporated a standardized measure of listening comprehension to monitor comprehension progress over their two year study which did show an increase in comprehension for the children in the intervention group.

Third, future studies involving bilingual children, whether simultaneous or sequential bilinguals should assess language abilities in both languages. In the current study, TNW did not significantly increase due to the intervention, however, language samples were elicited only in English. For bilingual children, the amount of words that they know is spread over two languages (Pearson & Fernandez, 1994), so if assessments are done in only one language, assessors may not be getting the complete picture of what the child knows.

Fourth, the need exists for more research regarding development of a practitioner-friendly tool for progress monitoring narrative skills in the classroom. Teacher participants in the current study expressed their belief that the story grammar intervention could be adapted for use in a group setting, and they also indicated that the intervention may be able to effect permanent changes in the narrative skills of the participants. In order to implement this intervention into the classroom, a more efficient measuring tool must be developed. The key to delivering effective intervention is using assessment tools that monitor the progress of students and evaluate the effectiveness of the intervention (Baker & Good, 1995).

Fifth, future studies could attempt to determine the most salient aspects of the story grammar intervention. Does the number of retellings of a story make a difference? Should the student manipulate the SGM rather than the interventionist? Should the student use the SGM for all retell steps of the intervention, including the final retell? How can explicit instruction be used during the co-telling section? Determining which

components of the intervention are critical can help to develop a more effective intervention.

Finally, future research might include generalization studies to examine the effects of the story grammar intervention with repeated retells in the content areas such as social studies. In a synthesis of research on effective instruction for ELLs, Gersten and Baker (2000) suggest that for ELLs content acquisition should merge with English language acquisition in such a way that content learning demands are high, and language demands are low. The use of the story grammar marker as a summarizing schema could help to reduce the linguistic demands of summarizing content area topics so that content might be more readily learned.

Implications for Practice

Considered in conjunction with previous research findings, the current study confirms that a story grammar intervention is an effective strategy for improving narrative proficiency, the ability to tell a coherent story (Heilmann, Miller, & Nockerts, 2010), in ELLs with SLI. Three previous studies used explicit teaching of story grammar elements in their interventions. Spencer and Slocum's (2010) study worked with five preschoolers, one of which was a Spanish- English fully bilingual student and another who was a Spanish-English ELL. Hayward and Schneider (2000) worked with 13 young monolingual children ages 4 to 6 years with severe language impairments. Petersen et al. (2012) worked with three monolingual children ages 6 to 8 years that had neuromuscular impairments and comorbid language impairments. This is the first study that worked with Spanish-English ELLs with language impairments.

Several implications can be derived from this research regarding: (a) explicit instruction; (b) the SGM as a schema; (c) choosing books for narrative intervention; and (d) differentiation of instruction.

Results from the current study indicate that explicit instruction in oral narrative skills can be effective in improving oral narrative abilities. The use of explicit instruction reduces the cognitive load for learners by lowering the task demands so they can focus on the high linguistic demand of retelling a story. The task of independent practice is not so daunting when modelling and guided practice have preceded it. For ELLs, understanding may be enhanced through instruction that uses routines, embeds redundancy in lessons, and provides explicit discussion of vocabulary and story structure (August & Hakuta, 1997).

Another instructional tool that supports ELLs is the Story Grammar Marker®, a schematic tool which also helps to reduce the cognitive load of the task so that the child has more available memory to deal with the high cognitive load of oral narration. Visual representations help ELLs by providing a system to organize and use new information (Hoover, Klingner, Baca, & Patton, 2008). The SGM gives children a structure for storytelling with representations of the characters, setting, the initiating event, the character's internal response, the plan, attempts to accomplish the plan, the consequences of the story, and the resolution. It may be useful as a modification within the general education setting in tasks that require storytelling skills.

Stories that are chosen for narrative intervention must be chosen carefully to follow the story grammar construction format and be within the Lexile level appropriate

for the comprehension level of the students. Care should be taken to find books that are culturally responsive to activate background knowledge and connect to the personal experiences of the learner (Correa & Miller, in press).

Another important implication for practice is that the narrative skill intervention used in the current study is engaging for students and can be easily implemented in any classroom, and it could be differentiated to match the needs of the children who need the intervention. Progress monitoring of narrative proficiency, using this intervention and the NSS scoring scheme, would allow the teacher or speech pathologist to analyze the strengths and weaknesses of a child's narrative proficiency. Individual Education Plan (IEP) goals could be developed by analyzing the categories of the NSS in which the child is having difficulty. Analysis of performance in each category could also show the instructor what needs to be expanded upon in the lessons. For example, if the child was consistently scoring low in the category of introduction, then the instructor would focus on having the child give more details about the setting and characters. Moreover, the database comparison tool from the SALT could be used to compare an ELL's performance with that of age-matched, language-matched peers.

Conclusion

Previous research indicates that narrative skills are not only essential tools used in social interactions (Duinmeijer et al., 2012) and in academic activities (Heilman, Miller, Nockerts, 2010; Petersen, Gillam, Spencer, & Gillam, 2010), they are correlated with reading achievement (Paul & Smith, 1993). Furthermore, previous research also informs that ELLs with SLI present with language that has lower levels of complexity (i.e. uses

simple sentence structures) and is shorter in length than that of their typically developing peers (McCabe & Bliss, 2004). In addition, ELLs with SLI have weaker morphosyntactic skills as well (Iluz-Cohen & Walters, 2012). While studies over the last 14 years have documented the effectiveness of story grammar interventions for students with disabilities (Hayward & Schneider, 2000; Green & Klecan-Aker, 2012; Petersen et al., 2010), for students without disabilities (Davies et al., 2004; Spencer & Slocum, 2010), and for ELLs (Cruz de Quiros et al., 2012; Schoenbrodt et al., 2003), there is a paucity of research related to narrative interventions for ELLs with SLI. Specifically, no studies that examine the explicit instruction of story grammar in relation to ELLs with SLI were identified. This study addressed this gap in the research by examining the effects of a story grammar intervention paired with repeated retells on the oral narrative skills of ELLs with SLI.

The present study offers several contributions to the literature on narrative skill interventions for ELLs with SLI. Findings from this study indicate that the use of a Story Grammar Marker® as a schema for narrative structure paired with repeated story retells to promote automaticity of storytelling has a positive effect on the narrative proficiency of this population. Using a multiple probe baseline design, a demonstration of experimental control across four participants was provided for narrative proficiency. The inclusion of treatment fidelity data contributes to the body of research in terms of quality design features. Along with high treatment fidelity, the description of the intervention procedures could be sufficient enough for other researchers to replicate the study.

Another important contribution involves the use of the narrative scoring scheme. The analysis of that data allowed the researcher to more closely examine each participant's progress in each category of the narrative scoring scheme. Outcomes from this study demonstrate ways that educators can use the narrative scoring scheme to measure language samples for the purpose of progress monitoring in the areas of language development of ELLs with SLI. Based on the results of this study, the teaching of story grammar elements paired with the use of repeated story retells is a promising practice that can enhance the narrative proficiency skills of ELLs with language impairments. In conclusion, the present study resulted in improved narrative proficiency for all participants and contributes to the field of special education a research-based practice that improves the linguistic and academic outcomes for ELLS with SLI.

APPENDICES

Appendix A

Story Grammar Marker ®

1. The head represents the characters in the story—the who or what the story is about.
2. The star is for the setting. This is where the story happens, what the character might see, hear, smell, feel/touch.
3. The shoe represents the initiating event. This is the kick-off, what really gets the story started.
4. The heart stands for the character's internal response, how he is feeling (sad, happy, angry, etc.)
5. The hand is for his plan he has made to accomplish something—how he is going to reach his goal.
6. The beads are the events/attempts to carry out the plan.
7. The bow is the direct consequence—what happens as a result of his attempts. This ties the story up.

8. The tiny heart is the resolution of the story or how the character feels about the how everything turned out.

Appendix B

The Narrative Scoring Scheme scoring rubric (Heilmann et al., 2010)

Characteristic	Proficient	Emerging	Minimal/immature
Introduction	Setting -Child states general place & provides some detail about the setting (e.g., reference to the time of the setting—daytime, bedtime, or season). -Setting elements are stated at appropriate place in story. Characters -Child may provide description of specific element of setting (e.g., the frog is in the jar). -Main characters are introduced with some description or detail provided	Setting -Child states general setting but provides no detail. -Description or elements of story are given intermittently through story. -Child may provide description of specific element of setting (e.g., the frog is in the jar). OR Characters -Characters of story are mentioned with no detail or description.	-Child launches into story with no attempt to provide the setting
Character development	-Main character(s) & all supporting character(s) are mentioned. -Throughout story it is clear that child can discriminate between main & supporting characters (e.g., more description of & emphasis on main character[s]). -Child narrates in	-Both main and active supporting characters are mentioned. -Main characters are not clearly distinguished from supporting characters.	-Inconsistent mention is made of involved or active characters. -Characters necessary for advancing the plot are not present.

	first person using character voice (e.g., "You get out of my tree," said the owl).		
Mental states	-Mental states of main & supporting characters are expressed when necessary for plot development & advancement. -A variety of mental state words are used.	-Some mental state words are used to develop character(s). -A limited number of mental state words are used inconsistently throughout the story.	No use is made of mental state words to develop characters.
Referencing	-Child provides necessary antecedents to pronouns. -References are clear throughout story.	-Referents/antecedents are used inconsistently.	-Pronouns are used excessively. -No verbal clarifiers are used. -Child is unaware listener is confused.
Conflict resolution	-Child clearly states all conflicts & resolutions critical to advancing the plot of the story.	-Description of conflicts & resolutions critical to advancing the plot of the story is underdeveloped. OR -Not all conflicts & resolutions critical to advancing the plot are present.	-Random resolution is stated with no mention of cause or conflict. OR -Conflict is mentioned without resolution. OR -Many conflicts and resolutions critical to advancing the plot are not present.
Cohesion	-Events follow a logical order. -Critical events are included, while less emphasis is placed on minor events. -Smooth transitions are provided between events.	-Events follow a logical order. -Excessive detail or emphasis provided on minor events leads the listener astray. OR -Transitions to next event are unclear. OR	-No use is made of smooth transitions.

		-Minimal detail is given for critical events. OR -Equal emphasis is placed on all events.	
Conclusion	-Story is clearly wrapped up using general concluding statements such as "and they were together again happy as could be."	-Specific event is concluded, but no general statement is made as to the conclusion of the whole story.	-Child stops narrating, & listener may need to ask if that is the end.

Scoring: Each characteristic receives a scaled score of 0–5. Proficient characteristics = 5; Emerging = 3; Minimal/immature = 1. Scores between (i.e., 2 and 4) are undefined; use judgment. Scores of zero and NA are defined below. A composite is scored by adding the total of the characteristic scores. Highest score = 35.

A score of zero is given for child errors (such as telling the wrong story, conversing with examiner, not completing/refusing task, using wrong language and creating inability of scorer to comprehend story in target language, abandoned utterances, unintelligibility, poor performance, or components of rubric are in imitation-only).

A score of NA (nonapplicable) is given for mechanical/examiner/operator errors (such as interference from background noise, issues with recording such as cut-offs or interruptions, examiner quitting before child does, examiner not following protocol, or examiner asking overly specific or leading questions rather than open-ended questions or prompts).

Appendix C

Session Procedures for Story Grammar Intervention

(3 sessions per week for 30 minutes)

1. Progress monitoring prompt will be administered and videorecorded.
2. Introduction/ explanation/ review of story grammar elements: what they are called, what they represent, and how they are represented on the story grammar marker. The instructor calls the Story Grammar Marker ® a story braid.
    a. The head represents the characters in the story—the who or what the story is about.
    b. The star is for the setting. This is where the story happens, what the character might see, hear, smell, feel/touch.
    c. The shoe represents the initiating event. This is the kick-off, what really gets the story started.
    d. The heart stands for the character's internal response, how he is feeling (sad, happy, angry, etc.)
    e. The hand is for his plan he has made to accomplish something—how he is going to reach his goal.
    f. The beads are the events/attempts to carry out the plan.
    g. The bow is the direct consequence—what happens as a result of his attempts. This ties the story up.
    h. The tiny heart is the resolution of the story or how the character feels about the how everything turned out.

3. Instructor tells a story (from a script unseen by participant) and participant follows along, looking at the illustrations in the book. The text has been masked so the participant won't try to read the words. As the instructor tells the story, the instructor places sticky note arrows on the icons of the SGM to identify the story grammar elements as they are read in the story.
4. Instructor and participant review the story grammar elements specific to the current story being read.
5. The participant and instructor co-retell the story using the SGM and the book illustrations. The instructor says, "When we tell a good story, we use the items on the story braid to tell it." The instructor will provide support such as asking the child to look at the SGM to see what the next "piece" of the story should be, or to remind the child what the SGM icon stands for.
6. The participant retells the story with instructor support of the illustrations (no SGM).

Appendix D

Intervention Procedure Checklist

Session: _____ Checklist completed by _____

For each step, circle Y for YES if it occurred, N for NO if it did not occur.

R= Researcher

Intervention Phase Procedures		
Modeling		
Researcher introduces/explains/reviews SG elements and the icons that represent them on the story braid.	Y	N
R= "This is a story braid. It has things attached to it to remind us of all the parts of a story. The first one is characters. Characters are who the story is about."	Y	N
R= "The star represents the setting of the story, where and when the story takes place."	Y	N
R= "The shoe is the kick-off. It is what happens that makes the character want to make a plan to do something."	Y	N
R= "The heart represents the feelings of that the character feels when the kick-off happens."	Y	N
R= "The hand represents the plan that the character makes to reach a goal."	Y	N
R= "The beads represent the things that the character tries in order to reach his goal."	Y	N
R= "The white bow represents the consequences of the character's actions. It is what happened as a result of trying to reach his goal."	Y	N
R= "The pink hearts represent how the character feels now at the end of the story."	Y	N
R= "Now I am going to tell you a story, and I want you to follow along with the pictures in the book. As I tell the story, I will put an arrow sticker on the story braid to show what part of the story I am telling. We will discuss these when I finish. Next, you and I will tell the story together, and then you will have a chance to tell the story by yourself."	Y	N
The researcher tells the story from a script that the participant cannot see.	Y	N
Text in the book is masked.	Y	N
The researcher marks the SG elements on the SGM as she tells the story.	Y	N
The researcher marks the character icon (head).	Y	N

	The researcher marks the setting icon (star).	Y	N
	The researcher marks the kick-off (initiating event-shoe)icon.	Y	N
	The researcher marks the emotional response icon (heart).	Y	N
	The researcher marks the plan icon (hand).	Y	N
	The researcher marks the events icon(s) (beads).	Y	N
	The researcher marks the consequence icon (white bow).	Y	N
	The researcher marks the resolution icon (pink hearts).	Y	N
	Guided Practice		
	(Quick review) The researcher and the participant review the SG elements for that particular story and remove the arrow stickers as they discuss. First, they discuss who the character(s) is/are.	Y	N
	The researcher and participant discuss the setting.	Y	N
	The researcher and participant discuss the kick-off (initiating event).	Y	N
	The researcher and participant discuss the emotional response.	Y	N
	The researcher and participant discuss the character's plan.	Y	N
	The researcher and participant discuss the character's attempts to reach the goal.	Y	N
	The researcher and participant discuss the consequences.	Y	N
	The researcher and participant discuss the resolution.	Y	N
	(Co-telling) The researcher and the participant co-tell the story.	Y	N
	The researcher or the participant marks the SG elements on the SGM. They mark the character icon (head).	Y	N
	The researcher or the participant marks the setting (star).	Y	N
	The researcher or participant marks the kick-off (initiating event- shoe).	Y	N
	The researcher or the participant marks the emotional response (heart).	Y	N
	The researcher or the participant marks the character's plan (hand).	Y	N
	The researcher or the participant marks the character's attempt(s) to reach the goal (beads).	Y	N
	The researcher or the participant marks the consequences (white bow).	Y	N
	The researcher or the participant marks the resolution (pink hearts).	Y	N

Independent Practice		
Researcher removes the SGM from sight.	Y	N
Participant retells the story, using the illustrations.	Y	N

SG= story grammar; SGM= story grammar marker

Language Sample Elicitation Procedure Checklist

Session: _____ Checklist completed by _____

For each step, circle Y for YES if it occurred, N for NO if it did not occur.

Assessment procedures (for baseline and progress monitoring)		
Researcher says, "I would like to find out how you tell stories. First, I am going to tell you a story while we follow along in the book. When I have finished telling you the story, it will be your turn to tell the story using the same book. "	**Y**	**N**
Researcher reads the scripted story one time.	**Y**	**N**
Participant cannot see the script.	**Y**	**N**
Text in the book is masked.	**Y**	**N**
The participant retells the story, using the illustrations in the book.	**Y**	**N**
Researcher does not prompt the participant other than to say things like, "Keep going. Mmm hmm. You're doing fine. Is that the end?, etc."	**Y**	**N**

Language Sample Elicitation Procedure Checklist for Pre and Posttest

Session: _____ Checklist completed by _____

For each step, circle Y for YES if it occurred, N for NO if it did not occur.

Assessment procedures (for pre- and posttest)		
Researcher says, "I would like to find out how you tell stories. First, I am going to tell you a story while we follow along in the book. When I have finished telling you the story, it will be your turn to tell the story using the same book. "	**Y**	**N**
Researcher reads the scripted story one time.	**Y**	**N**
Participant cannot see the script.	**Y**	**N**
Researcher says, "Now it's your turn to tell the story."	**Y**	**N**
The participant retells the story, using the illustrations in the book.	**Y**	**N**
Researcher does not prompt the participant other than to say things like, "Keep going. Mmm hmm. You're doing fine. Is that the end?, etc."	**Y**	**N**

Appendix E

Social Validity Measure (for participants of story grammar)

"I have some questions to ask you. I just want to know how you feel about how using the story braid to tell stories. Just tell me how you feel about each question."

1. Listening to stories and working with the teacher was fun.

No  not sure  yes 

2. I know the parts of a story.

No  not sure  yes 

3. Using the story braid helped me learn how to tell stories better.

No  not sure  yes 

4. In my other classroom I try to use what I learned from using the story braid.

No  not sure  yes 

5. What I liked best about the intervention was:

6. What I didn't like about the intervention was:

Social Validity Questionnaire (Teacher Form)

Student: _____Teacher:_____ Date: _____

This questionnaire consists of eight items. For each item, you will need to indicate the extent to which you agree or disagree with each statement regarding the story grammar intervention. Please indicate your response by circling one of the five responses to the right for the first six items. Then, please write your responses for items 7 & 8 in the space provided.

Questions	Responses				
	1	2	3	4	5
1. Narrative skills are important in everyday life.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
2. Narrative abilities are connected to a student's reading and writing abilities.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
3. Activities were appropriate for 3rd/4th graders.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
4. The students seemed to enjoy the activities.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
5. The activities you saw in the video lesson could be adapted for use with larger groups of students.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
6. It is likely that this intervention will make permanent improvements in a student's narrative abilities.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

7. What types of students do think would benefit from this type of intervention?

8. Would you be willing to implement the intervention in your classroom? Why or why not?

Appendix F

Transcript Sample for Martina the Beautiful Cockroach

C = Child, E = Examiner
+ Name: Armando
- 7:18

C Well, Martina was a beautiful cockroach.
C When her family was so all do like that with her>
C One was give/ing her (the te*) the thing/s she want/ed.
C *They gave her this ball of shell, the dress and these.
C Then her grandma came.
C And then she told her to got coffee test.
C (But) but Catalina thought she need/ed a husband.
C But no (she) she need/ed a husband.
C So she had a party her husband.
C (The) then his father told him (this parrott) the parrott to (like) go fly and (uh) something.
C Then all these animal/s came (and then) to visit Catalina (to every for for the visit).
C And then Catalina (was) was (uh) cross/ing a leg and cross/ing and cross/ing.
C Then this little mouse saw her.
C Then the rooster came.
C (And that) and the rooster thought if he could be his wife.
C But no, Catalina brought some coffee on him.
C (Then the) then the rooster got angry because (he) he got coffee on his shoe/s.
E Mmhmmm.
C (Then) then (the pig ca*) el cerdo came.
C And then he saw that he was all nasty that (his) he was rotten egg/s with him something.
C Then Catalina put some coffee on his loafer/s.
C Then he squeak/ed and squawk/ed.
C (Then he) then he did/n't have an idea how to get rid of these demon/s.
C Then he got to>
C (Then the then iguan*) then iguana want/ed to marry Catalina.
C But no, Catalina thought (was) he was too blood for her.
C But then she spill/ed some coffee on him.
C Then he began to change his color/s.
C XXX.
C Then (when he when) when he got there then her grandma told her (that he) that she saw that there was a mouse over there.
C XX can tell her about that.
C Then the mouse told her.

C And then (she thought) he thought (he was) she was all beautiful.
C Then her grandma came with the coffee.
C But they were have/ing a fight with the coffee mug.
C (Then the) then the mouse came and got the coffee and spill/ed it.
C And then her shoe was all wet.
C And then :01 he told her that he had a grandma too.

-10:13

+ Introduction: 1
+ CharacterDev: 3
+ MentalStates: 3
+ Referencing: 3
+ ConflictRes: 3
+ Cohesion: 1
+ Conclusion:3

Standard Measures Report Sample from the SALT

A_Intv_P4		
STANDARD MEASURES		
	Child	**Examiner**
TRANSCRIPT LENGTH		
Total Utterances	37	1
# Analysis Set (C&I Verbal Utts)	33	1
Total Completed Words	351	1
Elapsed Time (2:55)	2.92	2.92
SYNTAX/MORPHOLOGY		
# MLU in Words	8.64	1.00
# MLU in Morphemes	9.27	1.00
SEMANTICS		
# Number Different Words	102	1
# Number Total Words	285	1
# Type Token Ratio	0.36	1.00
INTELLIGIBILITY		
% Intelligible Utterances	94%	100%
MAZES AND ABANDONED UTTERANCES		
# Utterances with Mazes	16	0
# Number of Mazes	25	0
# Number of Maze Words	47	0
# Maze Words as % of Total Words	14%	0%
Abandoned Utterances	2	0
VERBAL FACILITY AND RATE		
Words/Minute	120.34	0.34
Within-Utterance Pauses	1	0
Within-Utterance Pause Time	0.02	0.00
Between-Utterance Pauses	0	0
Between-Utterance Pause Time	0.00	0.00
OMISSIONS AND ERROR CODES		
# Omitted Words	1	0
# Omitted Bound Morphemes	0	0
Word-level Error Codes	0	0
Utterance-level Error Codes	0	0
# Calculations based on C&I Verbal Utts		

References

American Institutes for Research (2005b). English Language Development Assessment (ELDA) Technical Report: 2005 Operational and Field Test Administration. Washington, DC: Author.

American Library Association (Producer). (2013). *Awards, grants, and scholarships* [Award Lists]. Available from http://www.ala.org/alsc/awardsgrants

Anderson, R. C. (1984). Some reflections on the acquisition of knowledge. *Educational Researcher, 13*(9), 5-10.

August, D., & Hakuta, K. (1997). *Improving schooling for language-minority children: A research agenda.* Washington, DC: National Academy Press.

August, D., & Shanahan, T. (2006). *Developing reading and writing in second-language learners: Lessons from the report of the National Literacy Panel on Language-Minority Children and Youth.* Center for Applied Linguistics; International Reading Association; National Literacy Panel on Language-Minority Children and Youth (U.S.).

Baddeley, A. D. (2000). The episodic buffer: a new component of working memory? *Trends in Cognitive Science, 4*, 417–423.

Baker, S.K. & Good, R. (1995). Curriculum-based measurement of English reading with bilingual Hispanic students: A validation study with second-grade students. *School Psychology Review, 24*(4), 561-579.

Bedore, L. M., & Peña, E. D. (2008). Assessment of bilingual children for identification

of language impairment: Current findings and implications for practice. *International Journal of Bilingual Education and Bilingualism, 11,* 1–29.

Bedore, L. M., Peña, E. D., Gillam, R. B., & Ho, T. (2010). Language sample measures and language ability in Spanish-English bilingual kindergarteners. *Journal of Communication Disorders, 43*, 498-510.

Berman, R., & Slobin, D. (Eds.). (1994). *Relating events in narrative: A crosslinguistic developmental study*. Hillsdale, NJ: Erlbaum.

Bishop, D. V. M. (1992). The underlying nature of specific language impairment. *Journal of Child Psychology and Psychiatry, 33*, 1–64.

Bishop, D. V. M., & Adams, C. (1992). Comprehension problems in children with specific language impairment, literal and inferential meaning. *Journal of Speech, Language, and Hearing Research, 35*, 119-129.

Botting, N. (2002). Narrative as a tool for the assessment of linguistic and pragmatic impairments. *Child Language Teaching and Therapy, 18*, 1–21.

Boudreau, D. M. (2007a). *A comparison of narrative abilities in subgroups of children with language impairment.* Poster presented at the Symposium for Research in Child Language Disorders, Madison, WI.

Boudreau, D. M. (2007b). Narrative abilities in children with language impairments. In R. Paul (Ed.), *Language disorders from a developmental perspective* (pp. 331–356). Mahwah, NJ: Lawrence Erlbaum Associates.

Boudreau, D. M. (2008). Narrative abilities advances in research and implications for clinical practice. *Topics in Language Disorders, 28*(2), 99-114.

Boudreau, D. M., & Hedberg, N. L. (1999). A comparison of early literacy skills in children with specific language impairment and their typically developing peers. *American Journal of Speech-Language Pathology*, *8*(3), 249-260.

Brown, R. (1973). *A first language: The early stages.* Cambridge, MA: Harvard University Press.

Cleave, P. L., Girolametto, L. E., Chen, X., & Johnson, C. J. (2010). Narrative abilities in monolingual and dual language learning children with specific language impairment. *Journal of Communication Disorders, 43*, 511-522.

Correa, V. I. & Miller, R. (in press). What is high quality instruction for English language learners in inclusive schools? In J. McLesky, N. Waldron, F. Spooner, & B. Algozzine (Eds.), *Handbook of Research and Practice for Effective Inclusive Schools.*

Cruz de Quiros, A. M., Lara-Alecio, R., Tong, F., & Irby, B. J. (2012).The effect of a structured story reading intervention, story retelling and higher order thinking for English language and literacy acquisition. *Journal of Research in Reading*, *35*(1), 87–113.

Davies, P., Shanks, B., & Davies, K. (2004). Improving narrative skills in young children with delayed language development. *Educational Review, 56*(3), 271-286.

Deedy, C. A. (2007). *Martina the Beautiful Cockroach.* Atlanta, GA: Peachtree Publishers.

Dickinson D., & McCabe, A. (1991). A social interactionist account of language and

literacy development. In J. Kavanaugh (Ed.), *The Language Continuum* (pp. 1-40), Parkton, MD: York Press.

Dickinson D., & McCabe, A. (2001). Bringing it all together: The multiple origins, skills, and environmental supports of early literacy. *Learning Disabilities Research & Practice, 16*(4), 186–202.

Dickinson, D., & Tabors, P. (2001). *Beginning literacy with language.* Baltimore, MD: Brookes.

Diminio, J. A., Taylor, R. M., & Gersten, R. M. (1995). Synthesis of the research on story grammar as a means to increase comprehension. *Reading & Writing Quarterly, 11*(1), 53-72.

Dodwell, K. & Bavin, E. L. (2008). Children with specific language impairment: An investigation of their narratives and memory. *International Journal of Communication and Language Disorders, 43*(2), 201-218.

Duinmeijer, I., de Jong, J., Scheper, A. (2012). Narrative abilities, memory, and attention in children with a specific language impairment. *International Journal of Language and Communication Disorders, 47*(5), 542-555.

Echeverría, M. S. (1979). *Longitud del enunciado infantil: Factores ambientales e Individuales* [Children's mean length of utterance: Environmental and individual factors]. Paper presented at the Estudios Generales I. Actas del 5o. Seminario de Investigación y Enseñanza de la Linguística y Universidad Técnica del Estado, Santiago, Chile.

Fiestas, C. E., & Peña, E. D. (2004). Narrative discourse in bilingual children: Language

and task effects. *Language, Speech, and Hearing Services in Schools, 35*, 155–168.

Freeman, D. (1968). *Corduroy*. New York, NY: Puffin Books.

Gathercole, S., & Baddeley, A. (1990). Phonological memory deficits in language disordered children: Is there a causal connection? *Journal of Memory and Language, 29*, 336–360.

Gersten, R. & Baker, S. (2000). What we know about effective instructional practices for English-language learners. *Exceptional Children, 66*(4), 454-470.

Gersten, R., Baker, S.K., Shanahan, T., Linan-Thompson, S., Collins, P., & Scarcella, R. (2007). *Effective literacy and English language instruction for English learners in the elementary grades: A practice guide* (NCEE 2007-4011). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from http://ies.ed.gov/ncee.

Gersten, R., Fuchs, L. S., Williams, J. P, & Baker, S. (2001). Teaching reading comprehension strategies to students with learning disabilities: A review of the research. *Review of Educational Research, 71*(2), 279-320.

Gillam, S. L., Gillam, R. B., Petersen, D., & Bingham, C. (2008). *Narrative Language Intervention Program: Promoting oral language development*. Research presentation at the American Speech-Language-Hearing Association Annual Convention, Chicago, IL.

Girolametto, L.,Wiigs, M., Smyth, R.,Weitzman, E., & Pearce, P. (2001). Children with a

history of expressive language delay: Outcomes at 5 years of age. *American Journal of Speech-Language Pathology, 10*, 358–369.

Green, L. B., & Klecan-Aker, J. S. (2012). Teaching story grammar units to increase oral narrative ability: A group intervention study. *Child Language Teaching and Therapy, 28*(3) 263–276.

Gutiérrez-Clellen, V. F. (1995). Narrative development and disorders in Spanish-speaking children: Implications for the bilingual interventionist. In H. Kayser (Ed.), *Bilingual speech language pathology: An Hispanic Focus* (pp. 97–128). San Diego, CA: Singular.

Gutiérrez-Clellen, V. F. (2002). Narratives in two languages: Assessing performance of bilingual Children. *Linguistics and Education*, *13*(2), 175–197.

Harrington, J. N. (2007). *The Chicken-Chasing Queen of Lamar County.* New York: NY, Melanie Kroupa Books.

Hayward, D. V., Gillam, R. B., & Lien, P. (2007). Retelling a script-based story: Do children with and without language impairments focus on script and story elements? *American Journal of Speech-Language Pathology, 16*(3), 235-245.

Hayward, D., & Schneider, P. (2000). Effectiveness of teaching story grammar knowledge to pre-school children with language impairment. An exploratory study. *Child Language Teaching and Therapy, 16*(3), 255-284.

Heilmann, J., Miller, J. F., & Nockerts, A. (2010). Sensitivity of narrative organization measures using narrative retells produced by young school age children. *Language Testing, 27*(4), 603-626.

Heilmann, D., Miller, J.F., Nockerts, A., & Dunaway, C. (2010). Properties of the narrative scoring scheme using narrative retells in young school-age children. *American Journal of Speech-Language Pathology*, *19*, 154-166.

Heilmann, J., Nockerts, A., & Miller, J. F. (2010). Language sampling: Does the length of the transcript matter? *Language, Speech, and Hearing Services in Schools, 41*, 393-404.

Hoover, J.J., Klingner, J.K., Baca, L.M., & Patton, J.M. (2008). *Methods for teaching culturally and linguistically diverse exceptional learners*. Upper Saddle River, NJ: Pearson.

Iluz-Cohen, P., & Walters, J. (2012). Telling stories in two languages: Narratives of bilingual preschool children with typical and impaired language. *Bilingualism: Language and Cognition, 15*(1), 58-74.

International Reading Association. (2013). *Children's Choices Reading list* [Recommended Book List]. Retrieved from: http://www.reading.org/resources/booklists/childrenschoices.aspx

Keats, E. J. (1964). *Whistle for Willie.* New York, NY: Penguin, Putnam, Inc.

Kennedy, C. H. (2005). *Single case designs for educational research.* Boston, MA: Pearson Education.

Klecan-Aker J. S., & Brueggeman, L. (1991). *The Expression Connection: A Structured Approach to Teaching Storytelling to School-age Children.* Vero Beach, FL: Speech Bin.

Kohnert, K., Kan, P. F., & Conboy, B. T. (2010). Lexical and grammatical associations in

sequential bilingual preschoolers. *Journal of Speech, Language, and Hearing Research, 53*, 684-698.

Kratochwill, T. R., & Levin, J. R. (2010). Enhancing the scientific credibility of single-case intervention research: Randomization to the rescue. *Psychological Methods, 15*(2), 124-144.

Krippendorff, K. (1980). *Content analysis: An introduction to its methodology.* Beverly Hills, CA: Sage.

Lesaux, N., & Geva, E. (2006). Synthesis: Development of literacy in language-minority students. In D. August & T. Shanahan (Eds.), *Developing literacy in second-language learners* (pp. 53-74). Mahwah, NJ: Lawrence Erlbaum Associates.

Loban,W. (1976). Language development: Kindergarten through grade 12. Urbana, IL: National Council of Teachers of English.

Marchman, V.A., Martínez-Sussman, C. , & Dale, P.S. (2004). The language-specific nature of grammatical development: Evidence from bilingual language learners. *Developmental Science, 7*, 212-224.

Mastropieri, M. A. & Scruggs, T. E. (1998). Summarizing single-subject research: Issues and applications. *Behavior Modification, 22*(3), 221-242.

Mayer, M. (1969). *Frog, Where Are You?*, New York, NY: Dial Press.

McCabe, A., & Bliss, L. S. (2004). Narratives from Spanish-speaking children with impaired and typical language development. *Imagination, Cognition, and Personality, 24*(4), 331-346.

McCabe, A., & Rollins, P. R. (1994). Assessment of preschool narrative skills. *American*

Journal of Speech–Language Pathology, 3(1), 45–56.

McCardle, P., Mele-Mcarthy, J., & Leos, K. (2005). English language learners and learning disabilities: Research agenda and implications for practice. *Learning Disabilities Research & Practice, 20*(1), 68-78.

McGregor, K. K. (2000). The development and enhancement of narrative skills in a preschool classroom: Towards a solution to clinician-client mismatch. *American Journal of Speech–Language Pathology, 9*(1), 55-71.

McPhail, D. (1999). *Mole Music.* New York, NY: Henry Holt and Company.

Meredith Corporation. (2013). *Best children's books by age* [Recommended Book List]. Retrieved from: http://www.parents.com/fun/book-gallery/

Merritt, D. and Liles, B. (1987). Story grammar ability in children with and without language disorder: story generation, story retelling and story comprehension. *Journal of Speech and Hearing Research 30,* 539–552.

Miller, J. F. (1987). A grammatical characterization of language disorder. In J. Martin, P. Flatcher, R. Grunwell, & D. Hall (Eds.), *Proceedings of the First International Symposium on Specific Speech and Language Disorders in Children* (pp. 100-113). London: England: Afasic.

Miller, J. F., Andriachi, K., & Nockerts, A. (2011). Analyzing language samples. In J.F. Miller, K. Andriacchi, & A. Nockerts (Eds.), *Assessing Language Production Using SALT Software* (pp. 41-62). Middleton, WI: SALT Software, LLC.

Miller, J. F., Andriacchi, K., & Nockerts, A. (2012). *SALT: Systematic Analysis of Language Transcripts 2012 Clinical.* Middleton, WI: SALT Software, LLC.

Miller, J., & Heilmann, J. (2004). *Bilingual language project update.* Paper presented at the Department of Communicative Disorders Colloquium, Madison, WI.

Miller, J. F., & Iglesias, A. (2012). *Systematic analysis of language transcripts (SALT), Version 2012* [Computer software]. SALT Software, LLC.

Miller, J. F., Heilmann, J., Nockerts, A., Iglesias, A., Fabiano, L., & Francis, D. J. (2006). Oral language and reading in bilingual children. *Learning Disabilities Research & Practice, 21*(1), 30–43.

Montgomery, J. (1995). Sentence comprehension in children with specific language impairment: the role of phonological working memory. *Journal of Speech and Hearing Research, 38*, 187–199.

Muñoz, M. L., Gillam, R. B., Peña, E. D., & Gulley-Faehnle, A. (2003). Measures of language development in fictional narratives of Latino children. *Language, Speech, and Hearing Services in Schools, 34*, 332-342.

National Clearinghouse for English Language Acquisition (2010). *The growing number of English language learner students 1997/98-2007/08.* Washington D. C.: George Washington University. Retrieved from http://www.ncela.gwu.edu/files/uploads/9/growingLEP_0708.pdf

Nielsen, D.C., & Friesen, L. D. (2012). A Study of the Effectiveness of a Small-Group Intervention on the Vocabulary and Narrative Development of At-Risk Kindergarten Children. *Reading Psychology, 33*, 269–299.

Paas, F., Renkl, A., & Sweller, J. (2003). Cognitive load theory and instructional design: Recent developments. *Educational Psychologist, 38*(1), 1-4.

Palatini, M. (1997). *Piggie Pie.* New York, NY: Scholastic, Inc.

Paradis, J. (2010). The interface between bilingual development and specific language impairment. *Applied Psycholinguistics, 31*, 227-252.

Paul, R. and Smith, R.L. (1993). Narrative skills in 4-year-olds with normal, impaired, and late-developing language. *Journal of Speech, Language, and Hearing Research, 36*(3), 592-598.

Pearson, B. Z. (2002). Narrative competence among monolingual and bilingual school children in Miami. In D. K. Oller & R. E. Eilers (Eds.), *Language and literacy in bilingual children* (pp. 135–174). Buffalo, NY: Multilingual Matters Ltd.

Pearson, B.Z., & Fernandez, S.C. (1994). Patterns of interaction in the lexical growth in two languages of bilingual infants and toddlers. *Language Learning, 44*(4), 617-653.

Pearson, B. Z., Fernandez, S. C., & Oller, D. K. (1993). Lexical development in bilingual infants and toddlers: Comparison to monolingual norms. *Language and Learning, 43*, 93–120.

Peña, E. D., & Bedore, L. M. (2008). Bilingualism in child language disorders. In R. G. Schwartz (Ed.), *Handbook of child language disorders* (pp. 281–307). New York, NY: Psychology Press.

Peña, E. D., Summer, C., & Resendiz, M. (2007). Language variation, assessment and intervention. In A. G. Kamhi, J. J. Masterson, & K. Apel (Eds.), *Clinical decision making in developmental language disorders* (pp. 99–118). Baltimore, MD: Brookes Publishing.

Petersen, D. B. (2011). A systematic review of narrative-based language intervention with children who have a language impairment. *Communication Disorders Quarterly*, *32*(4), 207-220.

Petersen, D. B., Gillam, S. L., Spencer, T., & Gillam, R. B. (2010). The effects of literate narrative intervention on children with neurologically based language impairments: An early stage study. *Journal of Speech, Language, and Hearing Research, 53*, 961-981.

Peterson, C. (1990). The who, when, and where of early narratives. *Journal of Child Language*, *17*, 433-455.

Rice, M. L., Smolik, F., Perpich, D., Thompson, T., Rytting, N., & Blossom, M. (2010). Mean length of utterance levels in 6-month intervals for children 3 to 9 years with and without language impairments. *Journal of Speech, Hearing, and Language Research, 53*, 333- 349.

Riley, J. and Burrell, A. (2007). Assessing children's oral storytelling in their first year of school. *International Journal of Early Years Education, 15*(2), 181-196.

Saint Paul Public Schools. (2007). [Text Level Correlation Chart]. *Saint Paul's Project for Academic Excellence- The Reading Institute.* Retrieved from http://title1.spps.org/uploads/text_correlation_chart.pdf

SALT Software, LLC (Producer). (2012). *Course 1502 NSS- Narrative Scoring System* [Training Module]. Available from http://www.saltsoftware.com

Schoenbrodt, L., Kerins, M., & Gesell, J. (2003). Using narrative language intervention

as a tool to increase communicative competence in Spanish-speaking children. *Language, Culture, & Curriculum, 16*(1), 48-59.

Scholastic, Inc. (2013). *100 greatest books for kids* [Award List]. Retrieved from http://www.scholastic.com/100books/

Service, E., Simola, M., Metsänheimo, O., & Maury, S. (2002). Bilingual working memory span is affected by language skill. *European Journal of Cognitive Psychology, 14*(3), 383-408.

Simon-Cereijido, G., & Gutiérrez-Clellen, V. F. (2009). A cross-linguistic and bilingual evaluation of the interdependence between lexical and grammatical domains. *Applied Psycholinguistics 30,* 315–337.

Snow, C. E. (1991). The theoretical basis for relationships between literacy and language in development. *Journal of Research in Childhood Education, 6,* 5-10.

Soto, G. (2002). *If the Shoe Fits.* New York, NY: G.P. Putnam's Sons

South Carolina Association of School Librarians. (2013). *Picture book award* [Award List]. Retrieved from: http://scasl.net/awards/book-awards/picture-book/

Spencer, T. D., & Slocum, T. A. (2010). The effect of a narrative intervention on story retelling and personal story generation skills of preschoolers with risk factors and narrative language delays. *Journal of Early Intervention, 32*(3), 178-199.

Stadler, M. A., & Ward, G. C. (2005). Supporting the narrative development of young children. *Early Childhood Education Journal, 33*(2), 73-80.

Stein, N., & Glenn, C. (1979). An analysis of story comprehension in elementary school

children. In R. Freedle (Ed.), *New directions in discourse processing* (pp. 53-120). Norwood, NJ: Ablex.

Sweller, J. (1994). Cognitive load theory, learning difficulty, and instructional design. *Learning and Instruction, 4,* 295-312.

Tawney, J. W., & Gast, D. L. (1984). *Single subject research in special education.* Columbus, Ohio: Merrill.

Uccelli, P., & Páez, M.M. (2007). Narrative and vocabulary development of bilingual children from kindergarten to first grade: Developmental changes and associations among English and Spanish skills. *Language, Speech, and Hearing Services in Schools, 28*, 225-236.

U. S. Department of Education, National Center for Education Statistics. (2012). The condition of education 2012.

Verhoeven, L., Steenge, J., van Weerdenburg, M., & van Balkom, H. (2011). Assessment of second language proficiency in bilingual children with specific language impairment: A clinical perspective. *Research in Developmental Disabilities, 30,* 1798-1807.

Westby, C. (1989). Assessing and remediating text comprehension problems. In S. Kamhi & H. Catts (Eds.), *Reading disabilities: A developmental language perspective* (pp. 199-259). Boston: College-Hill Press.

Westerveld, M. F., & Gillon, G. T. (2008). Oral narrative intervention for children with mixed reading disability. *Child Language Teaching and Therapy 24*(1), 31–54.

White, S., & Clement, J. (2001). *Assessing the lexile framework: Results of a panel*

meeting (NCES 2001-08). U.S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Printing Office.

Woodcock, R. W. (1991). Woodcock Language Proficiency Battery-Revised: English and Spanish. Riverside Publishing; Itasca, IL.